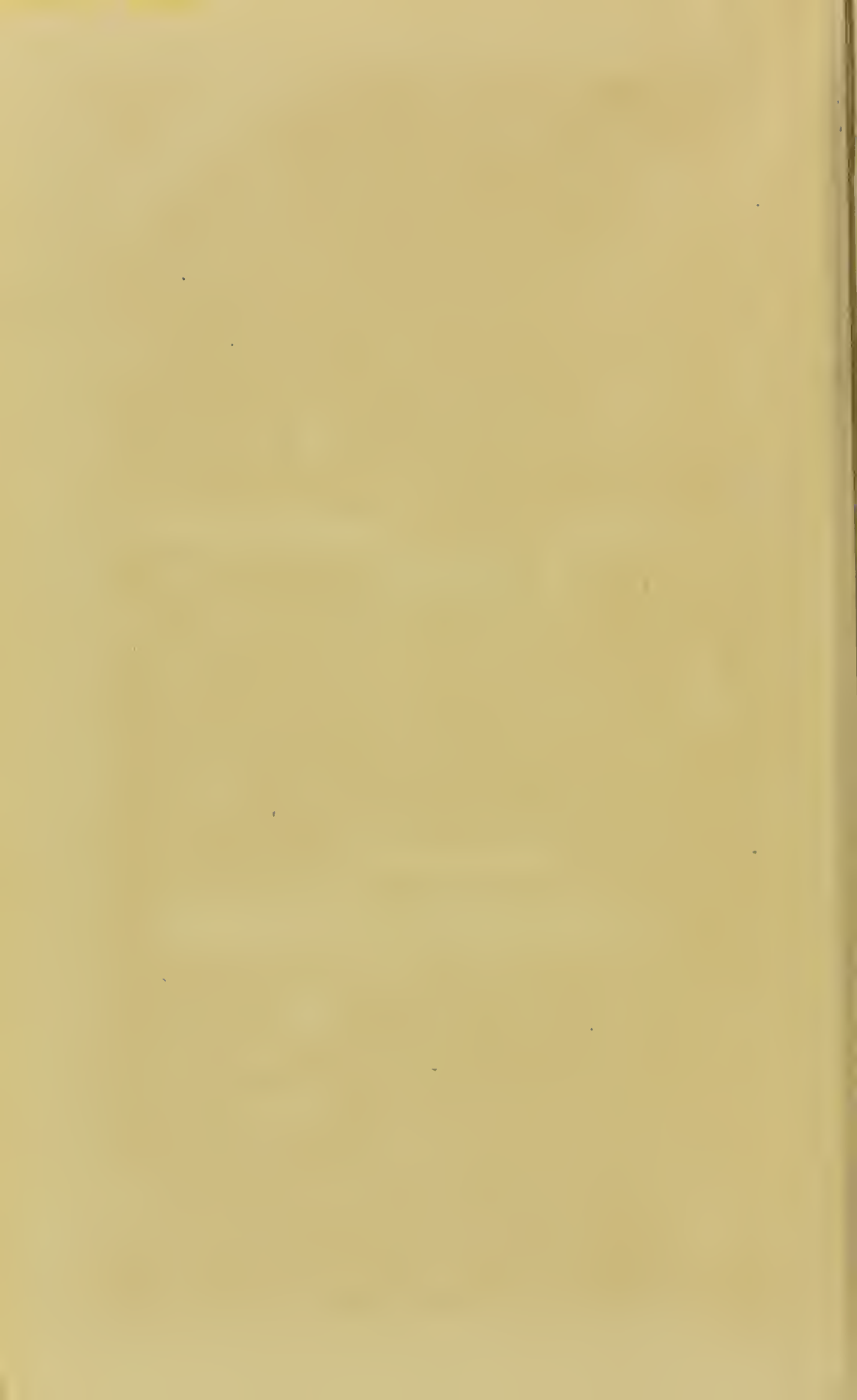


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THESAURUS CRANIORUM.

CATALOGUE

OF

THE SKULLS

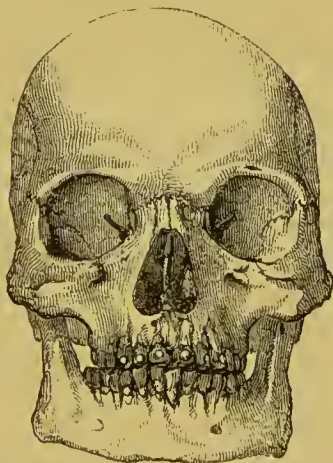
OF THE

VARIOUS RACES OF MAN,

IN THE COLLECTION OF

JOSEPH BARNARD DAVIS, M.D., F.S.A.,

CORR. MEMB. DELLA REALE ACCADEMIA DI MEDICINA DI TORINO, AND OF THE ACAD. OF NAT. SCI. OF PHILADELPHIA; MEMB. ASSOC. ÉTRANG. DE LA SOC. D'ANTHROPOLOGIE DE PARIS, ET DE LA SOC. DES AMIS DE LA NATURE DE MOSCOU; SOCIO CORRESPONDENT ESTRANERO DE LA SOCIEDAD ANTROPOLÓGICA ESPAÑOLA; MEMB. OF THE ETHNOLOGICAL, AND VICE-PRESIDENT OF THE ANTHROPOLOGICAL SOCIETIES OF LONDON; CORR. MEMB. OF THE AMERICAN ETHNOLOGICAL SOCIETY, AND OF THE BATAAFSCH GENOOTSCHAP DER PROEFONDERVINDELIJKE WIJSBEGEERTE TE ROTTERDAM; BUITENLANDSCH LID VAN HET PROVINCIAAL UTRECHTSCH GENOOTSCHAP VAN KUNSTEN EN WETENSCHAPPEN, ETC.



Delubra magnifica humanis consecrata simulacris.—CICERO, *Rep.* iii. 9.

LONDON:

PRINTED FOR THE SUBSCRIBERS.

1867.

This was once Ambition's airy hall,
The dome of Thought, the palace of the Soul.—HOOD.

This Volume is Dedicated

TO THE

*Commemoration of the Friendship of those of different nations
and in various parts of the world, who have so generously
contributed to the formation of my Collection, some of whom,
I lament to say, cannot now listen with mortal ears to the
expression of my thanks, and to that of the Gratitude and of
the Esteem of*

J. BARNARD DAVIS.

*Shelton, Hanley,
Staffordshire, August 1867.*

Le crâne humain, sorte de couronne posée par la main de la nature sur toute la création animale.—ALPHONSE ESQUIROS.

PREFACE.

IT was the study of the famous and classical 'Lectures on the Natural History of Man,' by my celebrated and now much lamented friend Sir William LAWRENCE, himself at that time a disciple of the school of BLUMENBACH and PRICHARD, which made me doubt the unity of man's origin—a doubt that was fully confirmed by the subsequent careful perusal of the 'Researches' of the last-named writer¹. Before that period, I had felt some curiosity in human skulls, which was promoted by various incidents. The lecture given by Mr. Joshua BROOKES, in his Anatomical Course, which he illustrated with a series of crania, some of which had a little history attached to them, was always of special interest to me. It is singular that some of the specimens then brought forward should, after a long lapse of years, have fallen into my hands. They were purchased, at the sale of his great Museum of Comparative Anatomy, by Mr. James DEVILLE, of the Strand, well known as "the Phrenologist," whose Collection I bought a few years ago (1861). An accidental conversation with a friend, since dead, led to the researches which resulted in the 'Crania Britannica.' At the

¹ Sir Wm. LAWRENCE, at the period at which he published his *Lectures*, attributed the differences among Human Races he so clearly pointed out to secondary causes. He never resumed the pen upon subjects of anthropology, and consequently we have not had the benefit of his more matured thoughts and his sounder views on the diversity of origin of the races of man. PRICHARD devoted himself to the advocacy of what were considered by his father opinions in accordance with Scripture, from which the latter conjured his son not to depart when at the University, and before he wrote his Inaugural Dissertation,—an injunction piously persevered in to the end of his career, although his candid spirit felt the great difficulties of such a position. His German translator (Prof. Rudolph WAGNER), at first, warmly espoused the doctrine of BLUMENBACH and PRICHARD, but, at a later period of life, became convinced of the diversity of origin of man and the diversity of kind also. He was likewise opposed to the modern transmutation hypothesis.

commencement of these researches, the importance of collecting skulls of all human races, and especially those of aboriginal peoples, for examination and comparison, was impressed upon my mind. In this way the Collection, of which the Catalogue is now issued, originated. My first purchase was made in 1848, of Nos. 15 and 16 (p. 316),—Mr. Matthew Moorhouse, of Adelaide, South Australia, having just before sent me the two calvaria of the Adelaide Tribe, Nos. 13 and 14 (pp. 258 and 259), curiously prepared as vessels for carrying water. The encouragement and very valuable assistance I have received from friends in many countries has, in the main, caused the Collection to expand to its present dimensions¹. A deep feeling of thankfulness to these friends, and an earnest desire to render the Collection as useful as it can be made, in the promotion of the science of rational craniology, have induced me to devote the labour of some four or more years to the preparation of this Catalogue, and to defray the cost of printing it in a handsome manner. When I first commenced it, the idea of having to make more than 25,000 minute and careful measurements with my own hands was almost oppressive. As it has proceeded, particularly after the completion of the beginning half, the work has become lighter. Whether the Catalogue will prove of commensurate value and use, I am not able to decide. Still I trust it will be both useful and valuable; and it will at least show that I have not been disregarding of the true interest of the cranial treasures which kind friends have placed at my disposal. It may be said that I have accumulated a vast mass of materials for future examination and generalization; I make no pretence to have exhausted the mine. Indeed I must confess to have contented myself with preparing a mere Catalogue, without attempting to develop or to support any great theory, a course which I have reason to believe will disappoint some excellent persons, who look upon nature as of value only as so much material to be worked up into hypotheses.

In the original design, it was intended to make this a descriptive catalogue, and to take for a model that of Professor J. VAN

¹ The Committee of Recommendations of the British Association, at the Birmingham Meeting, in 1866, voted the sum of £50 to make the Collection more complete, which was expended as a part payment for the 100 skulls purchased from the Museum of Prof. VAN LINTH DE JEUDE, of Utrecht.

DER HOEVEN; but it was soon found impossible to imitate the concise brevity and lucidness of his Latinity, and that a descriptive catalogue of 1500 specimens would be a work of far too great labour, far too bulky, and far too costly. In truth, anything like a complete descriptive catalogue of this Collection would require many octavo volumes. It was therefore decided to increase the number of measurements, both of a geometrical and anatomical character, so as to give as complete an idea of every example enumerated as possible in a brief space (to describe more at length in some cases, where peculiarities in the skull, its great rarity, or other circumstances required description), and to refer to figures already published, in order to complement the descriptions and measurements here given, and to assist the conceptions of the reader. In this way, the work has been made in a great degree an index to craniological literature, a bibliography of craniology, and in some measure a guide to collections of skulls, both in this country, on the continent of Europe, and in America.

I have entitled the volume simply a 'Catalogue,' and have avoided calling it descriptive or metrological, although it is to a considerable extent both. It is very probable that unexpected results in each of these relations may flow from its redaction. It is believed that it will serve to prove, or to confirm the proof, if confirmation be required, of the great value and importance of craniology, and also of the diversity of origin of man, and in this way to reduce the former to legitimate scientific dimensions, and to help in delivering anthropology from the A B C condition in which it has long been arrested¹. The proofs alluded to are

¹ If it were necessary to go into an appreciation of the value of craniology and its bearings upon the brain (to establish its true importance), and if any well-instructed person doubted this value, it might be asked, what is the meaning of the difference between the skulls of *men* and of *women*, in all races?

Prof. HUXLEY has lately had occasion to vindicate the significance of cranial forms (*Proc. Soc. of Antiq.* iii. 283, 2nd ser.). We need not go beyond our own continent to discover the most striking diversities. The peoples of western and of eastern Europe are quite remarkably contrasted. The prevailing long, oval cranium of western Europe is transformed into a brachycephalic broader form, singularly elevated across the middle of the parietal region, in many European races, as the Poles, the Magyars, the Czechs, the Slovaks, the Croats, the Rumanians, the Russniaks, the Russians.

derived from the essential peculiarities which are seen in the skulls of most races of people, and the distinguishing diversities of different races—for example, the crania of Europeans, of African Negroes, those of Australians, those of New Hebrideans, &c. The sharpness of these distinctions may be said to be ethnognomic, and is most impressive when we compare the skulls of neighbouring races:—for instance, those of Guanches and Negroes of the west coast; those of Boschsmans and Kafirs; those of Negritos and Bisayans; those of Hindoos and the sub-Himalayan tribes on the one side, and the natives of the Indian Archipelago on the other, &c. The examination of the crania of infants and of children of these and other peoples puts the diversities alluded to in a striking light. BLUMENBACH, with his usual discrimination, made good use of this indelible impress of race-peculiarities in early life for the establishment of his quinary division of mankind, in the Plates of his *Decas Tertia*¹, although its force as an evidence of something very like specific difference was wholly at variance with his system and was not attended to by him.

The imperfection of language, but much more the inability of the best efforts of the writer, fails to *describe* the diversified forms of the human skull in anything like a perfect manner. The *delineation* by figures would unquestionably help the conception, could these be executed by an artist so *skilful*, so *patient*, and so *pains-taking* as to be able to imitate and express all the nice differences of nature; but such a process would be far too expensive to be adopted here. Ample *measurements* will lend their aid; and the comparative and statistical methods I have introduced, to calculate *ratios* and to estimate *averages*, will all contribute to a correct appreciation of the delicate shades of variation in skulls, which are no doubt closely connected with the specific diversities that distinguish all the races of man.

and the Turks. The skulls of some of these peoples occur hereafter. The craniology of those of them who dwell in Austria has just received a most valuable elucidation by Prof. A. WEISBACH. He has collected more than 600 specimens, which are deposited in the Josefsacademie in Vienna, and produced an excellent and very complete memoir upon them (*Beiträge zur Kenntniss der Schädelform österreichischer Völker*, Wien, 1867).

¹ Tab. xxviii., "Puellæ Judaicæ;" Tab. xxix., "Infantis Buræti;" Tab. xxx., "Æthiopis neonati." 1795.

Still it must be admitted that every mode of investigation and representation is likely to prove somewhat imperfect, and inadequate to the full conception of the varieties and peculiarities in the originals. Some most distinguished men of science have, in their descriptions of human crania, chiefly looked out for anatomical variations. Here, without at all passing these by unobserved, it has been rather attempted to discriminate the minute physiognomical diversities which all acknowledge to exist among races, even where closely allied, and which the system of measurements employed has tended to develop.

When it is recollected how exceedingly interesting the cranium of man is in so many different relations, even æsthetically, it is deserving of notice that very few catalogues of objects of this kind have been published. Of the Göttingen Collection, the most famous and the oldest, and in many respects still the rarest and finest, BLUMENBACH, its distinguished founder, gave a list in his "*Index Supellectilis anthropologieae auctoris*," in the third edition of his treatise *De Generis Humani varietate nativa*¹. The number of his specimens then amounted to 82. At the time of his death (Jan. 15, 1840) he left behind 245 skulls and portions of skulls, as well as an Egyptian and a Guanehe mummy. The learned Prof. Rudolph WAGNER, in

¹ 1795. In speaking of his descriptions and engravings of skulls from this collection, he makes the following statement:—"hujus collectionis, quoad numerum et varietatem quantum seiam in suo genere unice, utpote cui neque CAMPERI neque Jo. HUNTERI similes collectiones hoc respectu comparari possunt" (p. xxii).

It may not be out of place here to correct an error into which the usually accurate LAWRENCE has fallen, where he tells us in his very valuable *Lectures* (ed. 1823, p. 328), that in the Tables of BLUMENBACH's *Decades Craniorum*, "the crania are represented of the natural size." I had long more than suspected that this was not the case; but in September 1864 I had the opportunity to measure two or three of the skulls themselves of the Blumenbachian Collection at Göttingen. The two chief *cimelia* of their distinguished owner, the elegant calvarium of the Ancient Greek (Tab. li.) and the beautiful skull of the Georgian woman (Tab. xxi.), are decidedly too small in these Tables. In the two dimensions I measured *they agree and are exactly of the same size*, viz. B 20·7, E 7·0. In the Table of the former E is only 6·3; in that of the latter, from the very faulty proceeding which destroys the utility of the majority of BLUMENBACH's Tables, that of giving an oblique view of the skull, a sort of three-quarters, it is impossible to ascertain the length (E) of the figure; but it is without any question, like every other dimension, much too small.

October 1856, laid an account of the state of the Anthropological Collection before the University of Göttingen. In this he says, "Den werthvollsten Theil bildete unstreitig die berühmte Schädelammlung, an welcher Blumenbach, unterstützt von seinen in allen Welttheilen zerstreuten Schülern und zahlreichen andern Gönnern, sein ganzes Leben mit Eifer gesammelt hatte und welche ihm bekanntlich als Hauptgrundlage für seine Forschungen in der Naturgeschichte des Menschengeschlechts diente"¹. WAGNER enumerates the additions made to the collection, gives a list of the exotic and normal skulls, and adds that the number of specimens then amounted to 310².

Of the magnificent Mortonian Collection, now in the possession of the Academy of Sciences of Philadelphia, there have been no less than four Catalogues. The zealous and able Prof. MORTON issued the first in 1840, when his Museum contained 561 specimens of crania, including some casts and mummies. The second edition came out in 1844, and embraced 584 specimens. He printed the third edition in 1849, when his Collection amounted to 896 specimens. Since his death (May 15, 1851), a greatly improved Catalogue has been compiled, with much diligence, by Dr. J. Aitken MEigs, and was printed in 1857. The entire collection then catalogued made a total of 1045 specimens. A copious Index is added to this edition.

The great comparative anatomist Prof. R. OWEN devoted more than 100 pages of his Quarto 'Catalogue of the Osteological Series of the Museum of the Royal College of Surgeons of England' (1853) to an elaborate anatomical description of the human crania and skeletons with which this grand collection is enriched. In this work he displayed his usual skill and acuteness, and catalogued about 266 distinct anthropological specimens. The further additions to the collection have not yet been printed. The Collection of Human Crania in the Museum of the Army Medical Department (then in the cellar at Fort Pitt, Chatham,

¹ *Nachrichten von der G. A. Universität und der Königl. Gesellschaft der Wissenschaften zu Göttingen*, No. 14, 1856, S. 233. WAGNER subsequently gave notices of the additions to the collection.

² Prof. R. WAGNER is now preparing, with the assistance of his younger son, an illustrated Catalogue of the Collection. [Alas! since this line was penned, this distinguished man has paid the debt of nature, and his projected works on craniology are no longer to be hoped for. He died May 13, 1864, aged 58 years.]

now at the Royal Hospital at Nettleby) received great attention from Dr. Geo. WILLIAMSON, who printed his "Observations" on the skulls, which form a descriptive catalogue, in the Dublin Quarterly Journal of Medical Science¹. The museum then contained 601 skulls, and likewise 5 skeletons and 27 casts. In the year 1858, the very eminent Academician, Karl Ernst VON BAER, brought the subject of their Ethnographie-Craniological Collection before the Academy of Sciences of St. Petersburg. His memoir contains a history of the collection and an enumeration of the specimens. It then consisted of 355 crania, 5 prepared heads, and 2 Peruvian mummies².

The descriptive Catalogue of the small private collection of skulls of the excellent and distinguished Professor of Zoology at Leiden, is remarkable for its elegance and for the rarity of the objects enumerated³. The number of the skulls is 171, which, with 39 casts, makes the entire series amount only to 210 specimens. It is preceded by some valuable "Praemonenda," which contain an important passage that is a high testimony, from such an authority, to the value of craniology. "Haec omnia * * * conjungenda sunt eum iis, qui e cranii diversitate nativa desumuntur, characteribus; hi enim nisi fallor primum quemdam ac praecipuum locum tenent, ubi de methodo naturali in disponendis generis humani varietatibus agitur" (p. 5). In 1861 Professor VAN DER HOEVEN made known the accessions his collection had received⁴. These are the principal craniological catalogues that have yet appeared, besides that in the *Musée Vrolik*.

In the year 1853 Professor KRIEGK published a list of the skulls and other anthropological objects of the Senckenberg Society, at Frankfurt⁵; and more recently Prof. J. C. G. LUCAS,

¹ 1857.

² *Nachrichten über die ethnographisch-craniologische Sammlung der K. Akademie der Wissenschaften zu St. Petersburg*, Mélanges Biologiques, Tom. iii. p. 38. Prof. VON BAER has subsequently given an account, in the same work, of the additions made to the collection.

³ *Catalogus Craniorum diversarum Gentium quae collegit J. Van der Hoeven*, 1860.

⁴ *Kort Bericht omtrent enige menschelijke schedels, met welke in de twee laatste jaren mijne Verzameling vermeerderd is geworden*.

⁵ *Verzeichniss der in dem Museum der Senckenb. natur. Gesells. aufgestellten Sammlungen ethnographische Gegenstände*, 1853.

equally eminent as an anatomist and craniologist, has printed two Memoirs on the crania in this museum, illustrated with figures of many of them drawn on the principle of geometrical projection¹. On the return of the 'Novara' Expedition to Vienna, there was a short catalogue issued of the ethnographie and anthropological objects acquired, which contains 96 skulls and 2 skeletons². In the year 1865 Dr. J. L. DUSSEAU issued a Catalogue of the fine Collection of skulls formed by the two VROLIKS, of Amsterdam, which had been prepared by Willem VROLIK before his death³. A 'Catalogue of the Bones of Mammalia in the Collection of the British Museum' was issued in 1862. The Museum contains in its cellars a considerable collection of human crania. These are ingeniously catalogued in two 8vo pages of this work, in so lucid and instructive a manner that it is difficult to ascertain the number even of the specimens! it appears to have been 139. The rarest of these skulls from the different islands of the Kingsmill Group, in the Pacific, on the equator, are dismissed with the remark, "From Mr. STEVENS's sale," *i. e.* a London auction-room. The finest anthropological collection extant is that of the Galerie Anthropologique of the Jardin des Plantes, at Paris. This Museum has a Professor of Anthropology attached to it, but, notwithstanding, as far as is known to the writer, remains without any printed Catalogue of its treasures. The diminution of the value and use of the Collection thus ensuing it would be difficult to overstate. The Collection is particularly rich in the skeletons of the different races of men. All these are evidences of a remark often before made, how much more individual zeal and enterprise, if it be untrammelled, but especially if encouraged, may do for the promotion of science than the patronage of governments⁴.

The extent of a collection is of much moment; for, besides affording more reliable averages of measurements, a large one is far more sure to illustrate the types of each race fully, and to contain

¹ *Zur Morphologie der Rassen-Schädel*, 1861, 1864.

² *Verzeichniss ethnographischer und anthropologischer Gegenstände*, 1860.

³ *Musée Vrolik, Cat. de la Coll. d'Anat. hum. comp. et pathol. de MM. Ger. et W. Vrolik*, 1865.

⁴ It should be added that a work by Prof. Anatolia BOGDANOFF, upon the 400 skulls and other anthropological objects in the Museum of the Société des Amis de la Nature, of the University of Moscow, has been printed. Moskwa, 1867, 4to.

its aberrant forms. The statement made by Prof. Theodor WALTZ, that only small collections of race-skulls exhibit different forms of skulls strikingly, whilst rich collections fill up the apparent intervening gaps and show a continual transition from every one form to every other¹, is only very partially correct, and is an assertion much more characteristic of a Professor of Philosophy than a Professor of Anatomy, essentially a science of observation. Although large collections, *philosophically considered*, must of necessity, by containing skulls which have some intermediate forms, tend to lessen distinctions, they, at the same time, serve to develop race-characters more fully, and to define the play of diversities round these race-characters with more precision. By the kind exertions of generous friends, whose names are mentioned under the examples they have contributed, or aided me in procuring, this Collection has been rendered tolerably complete with respect to some races. Still a large number of peoples, especially those of America and of Asia, have no representatives in it, and many others appear in much more slender proportions than is desirable for useful purposes. It is hoped that some of these lacunæ will yet be filled up by the assistance of friends who have it in their power to render such important services, and that a Supplement to this Catalogue may hereafter be required².

My best thanks are due to Dr. BEDDOE and to Dr. THURNAM for their valuable and unintermitted assistance, especially in passing this volume through the press³.

The arrangement of the following Catalogue is mainly *geographical*. The first *Number* relates to the position of the skull under the head to which it belongs; the second is the collection number inscribed on the specimen when received. An asterisk (*) distinguishes a *cast*, an obelisk (†) a *skeleton*.

¹ *Anthropologie der Naturvölker*, 1^{er} Theil, 1859, S. 248.

² At the date of the completion of this Preface, the current number of the specimens has reached 1540.

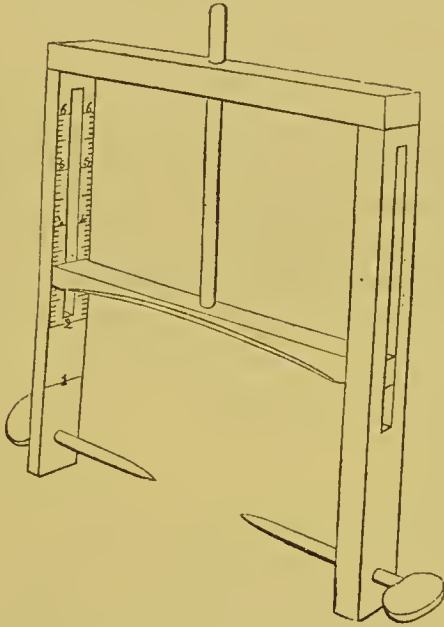
³ To placate those whose patience has been tried by delay in the appearance of this Catalogue, I may say that the MS. was placed in the hands of the printer in March 1866, and that no effort has been spared in urging on the printing. The pains taken to render the work correct may have demanded so slow a procedure; at least this requires an expression of my satisfaction. A further palliation must be allowed for the extension of the volume, which exceeds the size projected by one-fourth.

Measurements are inserted as far as they admit of being ascertained. The metrological references are these:—A. The *internal capacity*, expressed in ounces avoirdupois. This is determined by filling the calvarium with dry and clean Calais sand, the specific gravity of which is 1.425, and then weighing the sand. B. The *circumference* round the forehead, about an inch above the fronto-nasal suture, and over the most prominent part of the occiput. This is ascertained, like C and D, with a measuring-tape graduated in inches and tenths. C. The *fronto-occipital arch*, from the fronto-nasal suture, along the centre of the calvarium, to the posterior edge of the foramen magnum; *a*, length of the *frontal portion*; *b*, of the *parietal portion*; *c*, of the *occipital portion*. D. *Intermastoid arch*, from the tip of one mastoid process, across the vertex, to the tip of the other. E. The *longitudinal diameter*, or length, from the glabella to the most prominent point of the occiput, the glabella being regarded as about an inch above the fronto-nasal suture. F. The *transverse diameter*, or greatest breadth, distinguishing whether interparietal, *p*, or intertemporal, *t*; *a*, *frontal breadth*, taken at the most divergent points of the bone in the coronal suture; *b*, *parietal breadth*, at the protuberances; *c*, *occipital breadth*, at the junction of the occipital with the posterior inferior angles of the parietals. G. The *height*, from the plane of the foramen magnum to that of the vertex. These measurements, from E, are best taken with Mr. Busk's craniometer. *a*, *frontal height* or radius; *b*, *parietal height* or radius; *c*, *occipital height* or radius, *i. e.* the distance from the chord or axis of the external auditory orifices to the most prominent points of the frontal, of the parietal, and of the occipital, taken parallel to the mesial vertical plane of the calvarium by the wooden craniometer described in the 'Crania Britannica' (pp. 11 and 221'). H. The *length of the face*, from the nasal suture to the tip of the chin. I. The *breadth of the face*, or interzygomatic diameter, from the most prominent point of one zygomatic arch to that of the other. These dimensions may be taken with callipers, but are best taken by Mr. Busk's craniometer. All these measure-

¹ These radial distances, approximately indicating the depth or height of the anterior, middle, and posterior lobes of the cerebrum, may be determined equally by means of Mr. Busk's most convenient and useful craniometer. (See *Trans. Ethnol. Soc. Lond.* vol. i. p. 346.)

ments are expressed in English inches and tenths. J. The *proportion of the greatest breadth, F, to the length, E*, the latter taken as 1·00. K. The *proportion of the height, G, to the same, E*, taken as 1·00.

The terms *brachycephalic* and *dolichocephalic* are employed in this sense, viz.:—where the breadth is to the length in the proportion of ·80, or more, to 1·00, the skull is placed in the brachy-



Craniometer.—Quarter-size.

cephalic category; where it is below that proportion, or less than ·80 to 1·00, in the dolichocephalic. By *cranium* is meant the entire bones of the head, those of the face included; by *calvarium*, these bones without the lower jaw; and by *calvaria*, the bones of the vault of the skull alone. It is very unfortunate that collectors of skulls should not be aware that the preservation of the lower maxilla is of great importance, the calvarium alone being but a fragment of the eranium. The sign ♂ indicates a *male*, and ♀ a *female*. The sex is for the most part determined by the mere inspection of the cranium, in which there is no infallible rule; hence errors are apt to be made. Doubtful cases are marked as such. The insertion of the age has generally no other foundation, and is therefore marked approximatively, *circa*, c.

The letters E. B. P. show that the skull formed part of the

collection of Mr. E. B. PREE, of London; and D.C. signify that it belonged to that formed by Mr. Jas. DEVILLE, "the phrenologist," of the Strand, who died about 1846. The latter preserved a considerable number of "pièces justificatives," which, unfortunately, have not been transmitted to me. This collection, consisting of 212 specimens, was purchased in September 1861. In July 1865 the singularly fine collection of 100 crania and two skeletons, formed by the late Prof. VAN LIDTH DE JEUDE, of Utrecht, in Holland, was purchased. In point of condition these skulls are unrivalled, and many of them are of great rarity. The European skulls of this collection were those of soldiers in the armies of Napoleon when Holland belonged to him, and who died in the hospitals of that country in or about 1812. All these specimens are distinguished by the letters V.L.d. J.

The thousands of corrections I have made in the revision of the MS. of this Catalogue, make me feel that there must be many errors, perhaps inconsistencies, which have escaped my notice, for which I can only trust to the graciousness of the reader¹. Profound and professional anatomists will have to pardon many faults.

In the study of human crania, it is imperative that the various natural and artificial modes of *deformation* should be taken into account. Hence I have been led to pay a good deal of attention to them, as is seen by the different memoirs the titles of which are quoted in the following pages. A more general one appeared in the 'Proceedings of the Meeting of Scandinavian Naturalists, at Stockholm, 1863'². This essay, however, did not embrace the

¹ Two errors must receive some notice here. The *Lesgian* skull, No. 334 (p. 126), probably belongs to the northern side of the mountain-crest which divides Europe from Asia; still it is in its natural place among the Races of the Caucasus. The martial Lesgians are the mountaineers of Daghestan, which is also the country of the Avars, or Avarians, a skull of which Tribe has been figured by VON BAER (*Cran. Select. Tab. ii. fig. 6*). It is not at all unlike my Lesgian.

The skulls denominated *Khas*, Nos. 689 &c. (p. 158), came to me labelled "Hillman," which is a general name throughout India. I took great pains to obtain the proper attribution, but greatly regret to learn from a very high authority that I have not succeeded.

² "On the Importance of a due estimate of the different Modes and Degrees of Deformation of the Skull in the Study of Craniology, by J. Barnard DAVIS, M.D.," *Förhandlingar vid de Skandinaviska Naturforskarnes Nionde Möte i Stockholm*, 1863.

natural and intra-uterine deformation noticed by Dr. A. STADFELDT in a memoir read at the same Meeting¹.

Irregular modes of development, wherever they have been observed, are recorded in the Catalogue—which record, from the extent of the series, will serve to determine the frequency of such aberrations, about which frequency some mistakes have been made by eminent anatomists; and it also proves, what is very remarkable, that the relative frequency is quite different in different races. I have probably overlooked the occurrence of the *Sutura Infraorbitalis transversa* of Prof. HALBERTSMA².

Considerable pains have been taken to determine the authenticity of each skull. In a large part of the Collection the history of each is known. And, in exact agreement with BLUMENBACH, “I always keep together with these treasures a collection of autograph letters, by which documentary evidence the genuine history of each is preserved”³.

J. B. D.

Shelton⁴, Hanley,
Staffordshire, August 1867.

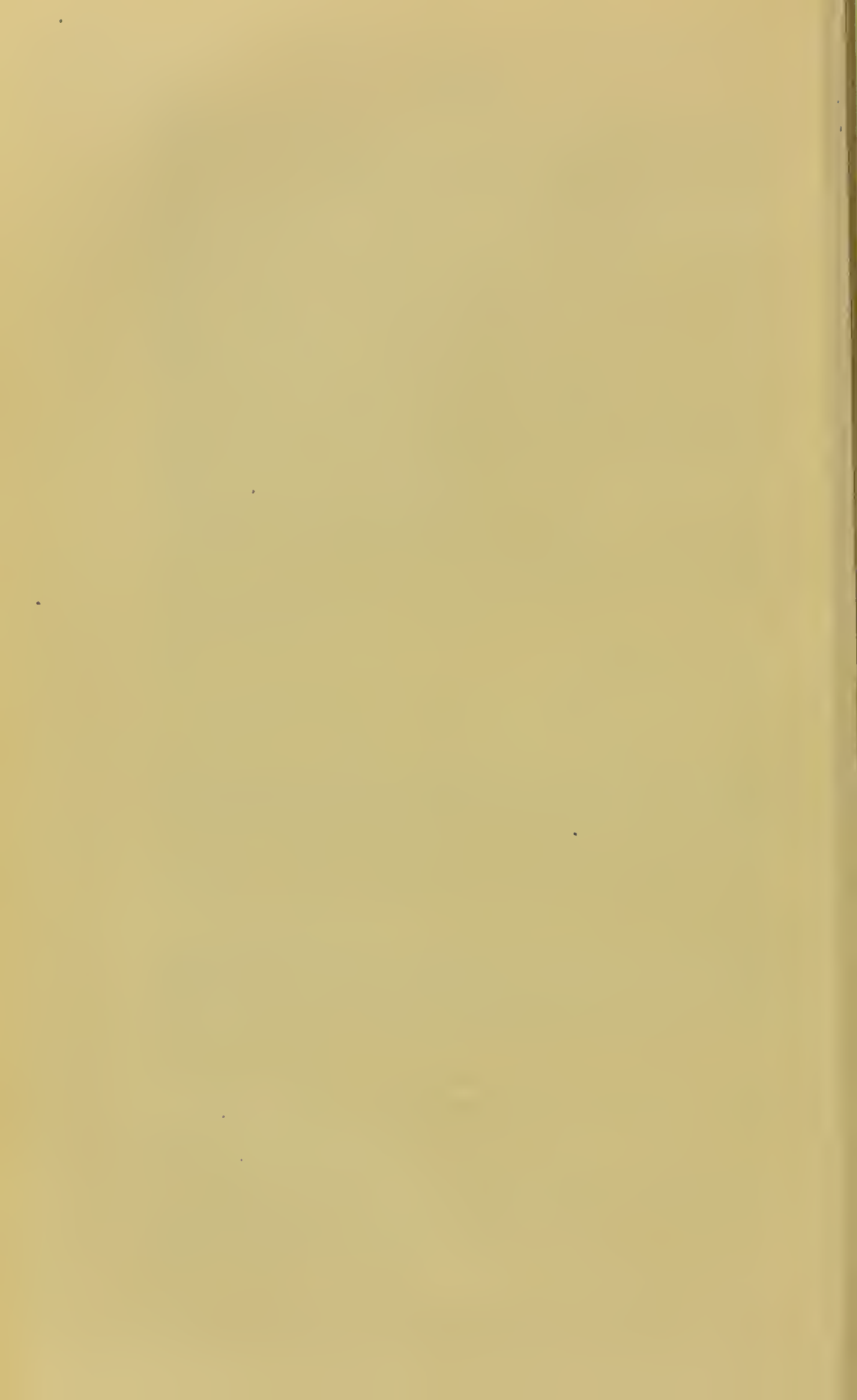
¹ *On the Asymmetry of the Body (“Axedeel”) of the Human Skeleton.* Translated by Dr. W. D. MOORE in the *Dublin Quart. Journ. Med. Sci.*, 1864.

It has been Prof. LUCÆ who, in his different works, has devoted such persevering attention to the elucidation of the asymmetry of the cranium.

² *De Sutura Infraorbitalis*, door H. J. HALBERTSMA.

³ *The Anthropological Treatises of J. F. BLUMENBACH*, by THOS. BENDYSHE, 1865, p. 155.

⁴ A town in a hollow, not on a hill (Hanley; A. S. *Hean*, high),—perhaps a fitting place for a Collection of skulls, for both words are derived from the same source:—*Scel*, *scell*, *scyll*, A. S., a shell, a cavity. *Skal*, Swed., a shell: *skål*, a bowl. *Skal*, Dan., a shell, a skull.



THESAURUS CRANIORUM.

I. EUROPEAN RACES.

A. RACES OF THE BRITISH ISLANDS.

a. ANCIENT BRITISH RACES.

1. *Aboriginal Races.*

1. 1. Ancient Briton. ♂, æt. c. 35. Imperfect calvarium.
B 20·8, C a 5·2, D 15·, E 7·3, F 5·8 p, c 4·5, J ·79.

This globose calvarium is only just excluded from the strictly brachycephalic category; parietal protuberances eminent; extensive parieto-occipital flatness.

From Chambered Barrow on the summit of Five Wells Hill, Taddington, Derbyshire (region of the CORITAVI), opened Aug. 25, 1846. BATEMAN, *Vestiges of Antiq. of Derbysh.* 1848, p. 91. *Crania Britannica*, 1860, Descr. Long-Lowe Skull, Pl. 33. p. (4), and p. 232.

2. 2. Ancient Briton. ♂, æt. c. 30. Imp. calv.
B 21·8, C 15·2, a 5·1, b 5·4, c 4·7, D 15·3, E 7·6, F 5·6 t, b 5·4, c 4·4, G 5·5, a 5·2, b 5·, c 4·4, J ·73, K ·72.

This large, regular, long, oval, modern-looking cranium belongs to the dolichocephalic series. It is of good height, and is remarkable for the abruptness at which the persistent bases of the nasal bones start up from the interorbital portion of the slightly receding frontal, and which is nearly at a right angle.

From a conical Barrow on Arbor Hill, near Throwley, Staffordshire (region of the CORNAVII), opened May 20, 1848. BATEMAN, *Ten Years' Diggings in Celtic and Saxon Grave-Hills*, 1861, p. 112.

3. 4. Ancient Briton. Very imperfect calvarium of a young person, received in October 1848, which immediately convinced

me of the fact of *posthumous* distortion—the designation I at once applied to this kind of deformation¹.

Found in a Barrow near Alport, Derbyshire (region of CORITAVI).

Nos. 1, 2, 4 from Mr. BATEMAN.

4. 97. Ancient Briton. ♂, æt. c. 40.

A 72·7, B 20·, C 14·3, a 5, b 5·2, c 4, D 14·7, E 7, F 5·6 p, a 4·8, b 5·4, c 5, G 5·3, a 4·5, b 4·7, c 3·5, H 4·4, I 5·2, J ·80, K ·75.

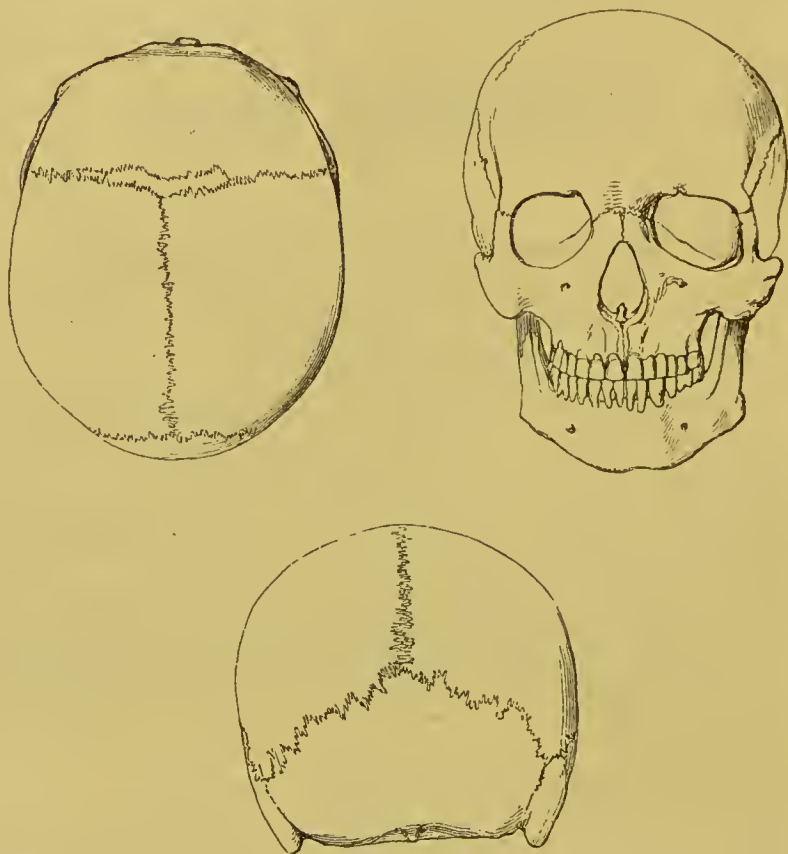


Fig. 1-3.—Cranium of Ancient Briton, from Green-Gate-Hill Barrow.
—No. 97.—Quarter-size.

¹ Dr. EUGÈNE ROBERT described this species of deformation in 1845 (*Voy. en Scandinavie, Géologie*, ii. 215); and Dr. THURNAM noticed it in his account of the opening of the tumulus of Lamel Hill, York (*Archæol. Journ.* March 1849, vi. 33). His allusion to it is confined to these words, "in many cases the bones of the cranium have been curiously twisted, apparently by the pressure of the soil," where the distortion is attributed to pressure alone, and is not designated posthumous. An attempt was made in the *Crania Britannica*, p. 37, to give the rationale of the phenomenon, and the communication to the *Athenæum* of August 1859 was entirely an exposition of the view there taken. The appearance had been long known to palæontologists. See also *Mem. Anthropol. Soc.* i. 479.

Fine, perfect brachycephalic cranium, only wanting the first upper molar on each side, which teeth have been lost during life.

This regular skull, presenting a well-formed, equable, and rather short calvarium, with marked ancient British face, having a prominent supranasal eminence, short and projecting nose, rather broad alveolar arches, and forward chin, is a favourable example of the typical ancient British cranium.

From Green-Gate-Hill Barrow, near Pickering, N. R. Yorkshire (region of BRIGANTES). Discovered July 20, 1852. *Crania Britannica*, Pls. 3 and 4, and Description.

5. 98. Ancient Briton. ♂, æt. e. 35. Imp. calv.

A 82·6, B 21·2, C 15, a 5, b 5·2, c 4·8, D 15·2, E 7·5, F 5·6 t, a 4·8, b 5·1, c 4·4, G 5·5, a 4·9, b 4·9, c 4·2, J ·74, K ·73.

An equable calvarium; very like 97 in most respects, yet longer; forehead broad, but not much elevated; occipital, above lower transverse ridge, very prominent.

Obtained from Green-Gate-Hill Barrow with 97.

6. 123*. Ancient Briton. ♂, advanced in life.

B 21·6, C 15·6, a 5·2, b 5·5, c 4·9, D 16, E 7·4, F 6·2 t, a 5·2, b 5·6, c 4·8, G 5·6, a 5·1, b 5·2, c 4·4, H 4·8, I 5·8, J ·84, K ·76.

Face rather broad, with very markedly expressed features; nose short and erect; forehead expanded and somewhat elevated; supraorbital ridges extremely prominent; calvarium short, wide, round, and high.

This strongly characterized skull of an ancient British Chief-

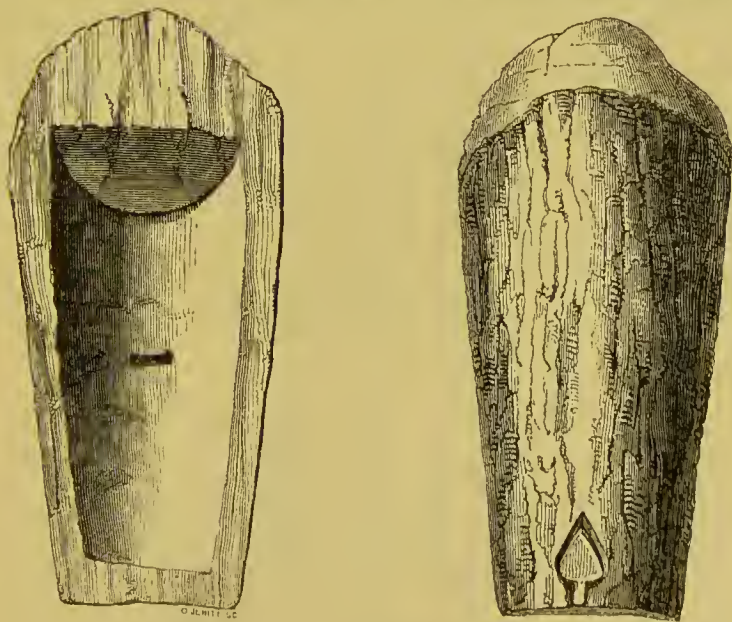


Fig. 4, 5.—Oaken Tree-Coffin.—Gristhorpe Barrow.

tain, at least 6 ft. 2 in. in stature, was found in a Barrow at Gristhorpe, N. R. Yorkshire (region of BRIGANTES), in 1834, in a coffin hollowed out of the split trunk of an oak. A bronze dagger-blade was among the relics.

WILLIAMSON, *Descr. of Tumulus at Gristhorpe*, 2nd ed. 1836.
RETZIUS, *Ethnologischen Schriften*, 1864, fol. pl. vi. fig. ii.
Crania Britannica, Pl. 52 and Descr. J. BARNARD DAVIS, *Scale-House Barrow, The Reliquary*, vol. v. p. 1.

7. 183. Ancient Briton. ♀, æt. c. 40. Very imperf. cran.
From a Barrow. Presented by Mr. JOSEPH MAYER, F.S.A.

8. 220. Ancient Briton. ♂, æt. c. 35. Imperf. calv.
B 19·4, C 13·6, a 4·7, b 4·9, c 4·, D 14·5, E 6·5, F 5·7 p, a 4·6,
b 5·7, c 4·4, G 4·7, a 4·6, b 4·7, c. 3·7, J ·87, K ·72.

A small, remarkably short, smooth, globular calvarium, very wide about the parietal protuberances and in the occipital region.

From a railway-cutting in Dorset (region of DUROTRIGES).
From Mr. J. Y. AKERMAN, F.S.A.

9. 221. Ancient Briton. ♂, æt. c. 50. Imperf. calv.
B 20·6, C 15·1, a 5, b 5·1, c 5, D 14·6, E 7·2, F 5·6 t, a 4·6,
b 5·1, c 4·8, G 5·2, a 4·9, b 5, c 4·2, J ·77, K ·72.

A regular, equable calvarium, its most elevated point being near the centre of the sagittal suture.

Found near Mickleton, Gloucester (region of DOBUNI), in cutting the northern end of the tunnel on the Oxford, Worcester and Wolverhampton Railway, 10 feet from the surface, in a stratum of indurated Blue Clay. Over this clay lay peat, in some places 8 feet in thickness, and containing bones of many animals, and, above the peat, a bed of detritus, or the "Northern Drift." The man had probably been "engulfed" in a bog.

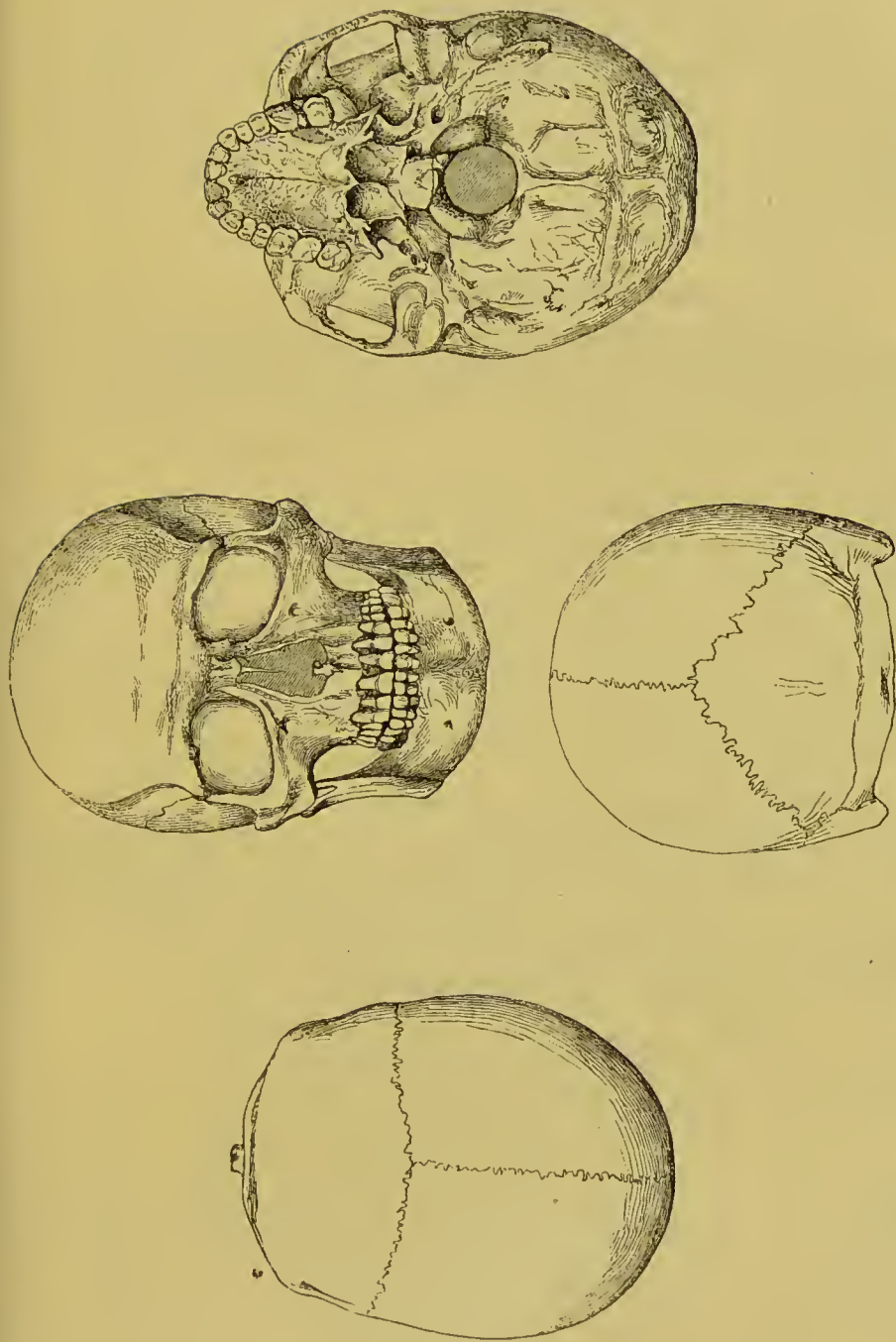
From Mr. GEO. ED. GAVEY, C.E., Engineer of the Railway.

The bones found in this spot have been the subject of much comment, as bearing on the question of fossil human remains. *Quart. Geol. Journ.* Feb. 1853, p. 32. BADEN POWELL's *Essays on the Spirit of the Induct. Phil.* 1855, p. 501. *Edinb. N. Phil. Journ.* iii. 24, Apr. 1856¹.

10. 680. Ancient Briton. Adult and most probably ♂.

Fragmentary remains of, and of his skin dress. Small portions of skull; piece of brain, converted into adipocere; five cervical vertebræ; left humerus, clavicle and first rib; right scapula and half of lower jaw; three teeth; locks of hair, which is *black*,

¹ This last is a most philosophical attempt to suppress inquiry, written in the mood of a holy inquisitor of Rome, or of Geneva.



Figs. 6-9.—Cranium of Ancient Briton, from Gristhorpe Barrow.—No. 123*.—Quarter-size.

&c. Portions of his dress, made from the skins of *Otters*, with the hair on, sewn, very neatly and regularly, with *sinews*.

Found in Sealeby Moss, Cumberland (region of BRIGANTES), May 28, 1843, at a depth of 14 feet, and 3 feet from the bottom.

The bones have been deprived of their salts by the acids of the bog, and transformed into leather by its tannin. Even the teeth have become flexible. Heather is said to contain as much tannin, weight for weight, as oak bark. WILDE's *Cat. Antiq. Mus. R. Irish Acad.* 1861, 276. See No. 1025 (*Irish, infra*).

From Mr. ROBERT FERGUSON, Carlisle.

11. 935. Ancient Briton. Child, æt. c. 2. D.C.

A beautiful little brachycephale, with large Wormian bones in both spheno-parietal sutures. The nasals are wanting. About half an inch of the frontal suture remains, at its anterior end.

12. 963. Ancient Briton. ♀, æt. c. 19. Imperf. calv. D.C.
B 19·9, C a 4·7, b 5, E 7·1, F a 4·4, b 5·2, c 4·6.

Nos. 935, 963, 934, 936 and 937, the latter an imperfect calvarium, are from the cemetery of Towyn-y-Capel, Island of Holyhead (region of ORDOVICES). *Archæol. Journ.* 1861, iii. 223. This cemetery is on a sandy hill on the seashore. The bodies had been interred in cists, constructed of rough flagstones for the sides, ends, and covers, but without bottoms. The sides and covers were generally formed of two or three stones.

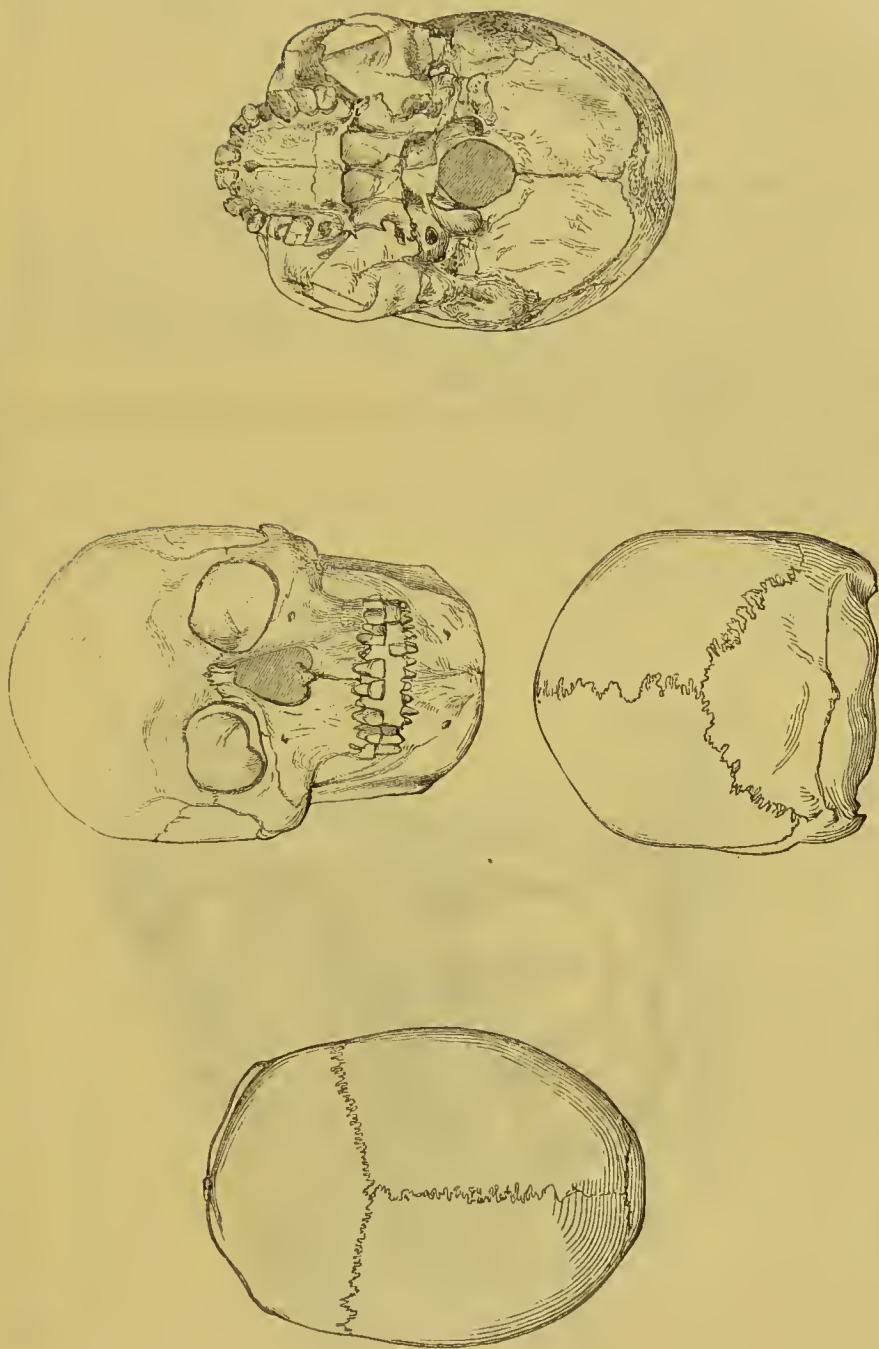
13. 1053. Ancient Briton. ♂, æt. c. 60.
A 77, B 20·6, C 15·1, a 5, b 5·5, c 4·6, D 14·9, E 7·3, F 5·6t, a 4·9, b 5·4, c 4·3, G 5·6, a 4·7, b 4·9, c 4·2, H 4·7, I 5·4, J 7·6, K 7·6.

From grave, Norton near Malton, Yorkshire (region of BRIGANTES). *Crania Britannica*, Pl. 37 and Deser.

Presented by Mr. JOSEPH MAYER, F.S.A.

14. 1118. Ancient Briton. ♀, æt. c. 10. Calv.
B 21·3, C 15·3, a 5·2, b 4·9, c 5·2, E 7·4, F 6p, a 5, b 5·1, c 4·4, G 5·6, a 4·9, b 4·9, c 4·2, J 81, K 75.

This fine calvarium of a girl, who cannot well have been more than ten years of age, as neither the permanent canines, the second premolars, nor the second molars have been erupted, was found in a short cist, which also contained three urns, in the yard of the Blue Bell Inn, in North Sunderland, 1862 (region of BRIGANTES). It presents the distinguishing peculiarities of the race, is brachycephalic and has great interparietal diameter. It has probably been the occurrence among children of such capacious crania as this, possibly hydrocephalic, which gave rise to the erroneous views as to the full growth of the brain being attained at the early ages of three, seven, and fourteen years, main-



Figs. 10-13.—Cranium of Ancient Briton, from Grave at Norton.—No. 1053.—Quarter-size.

tained by SÖMMERRING, the WENZELS, HAMILTON, and others. JAS. STRATTON, *Contributions to the Mathematics of Phrenology*, 1845, p. 12. HUSCHKE, *Schädel, Hirn und Seele*, 1845, S. 59. *Proc. Berwicksh. Nat. Club*, 1862, vol. iv. p. 428, and pl. xiii. where the skull and urns are figured.

Presented by Mr. GEO. TATE, F.G.S.

15. 1210. Ancient Briton. ♂, æt. c. 50.

A90, B 22, C16·3, *a* 5·4, *b* 5·7, *c* 5·2, D15·7, E 7·9, F5·7*p*, *a* 4·7, *b* 5·6, *c* 4·4, G 5·5, *a* 4·9, *b* 5, *c* 4·6, H 4·5, I 5·2, J·72, K·69.

The spheno-frontal and -parietal and the outer portions of the coronal suture, in the temporal regions, are obliterated. See Nos. 1029 (English) and 794 (Thai).

From a Long Barrow, at Rodmarton, Gloucestershire (region of DOBUN1), May 1863.

From Dr. THURNAM.

Crania Britannica, Pl. 59 and Description.

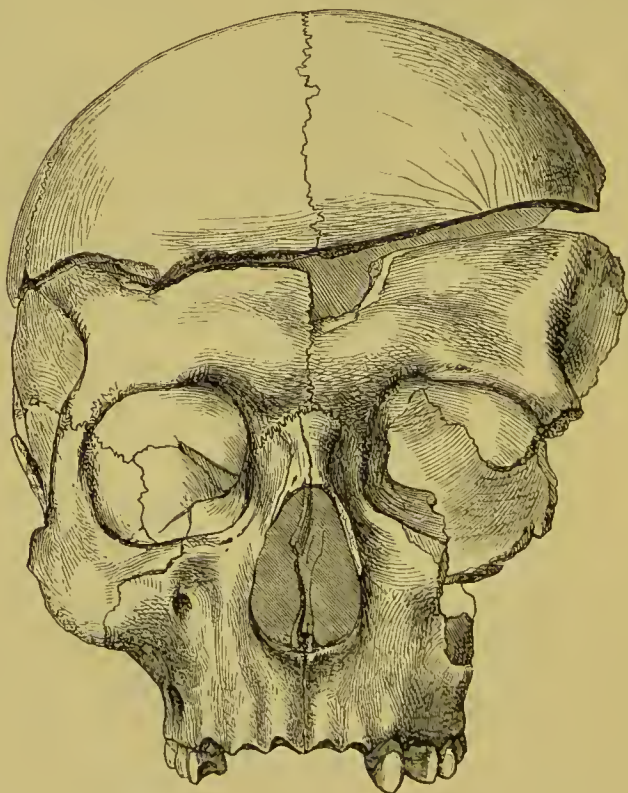
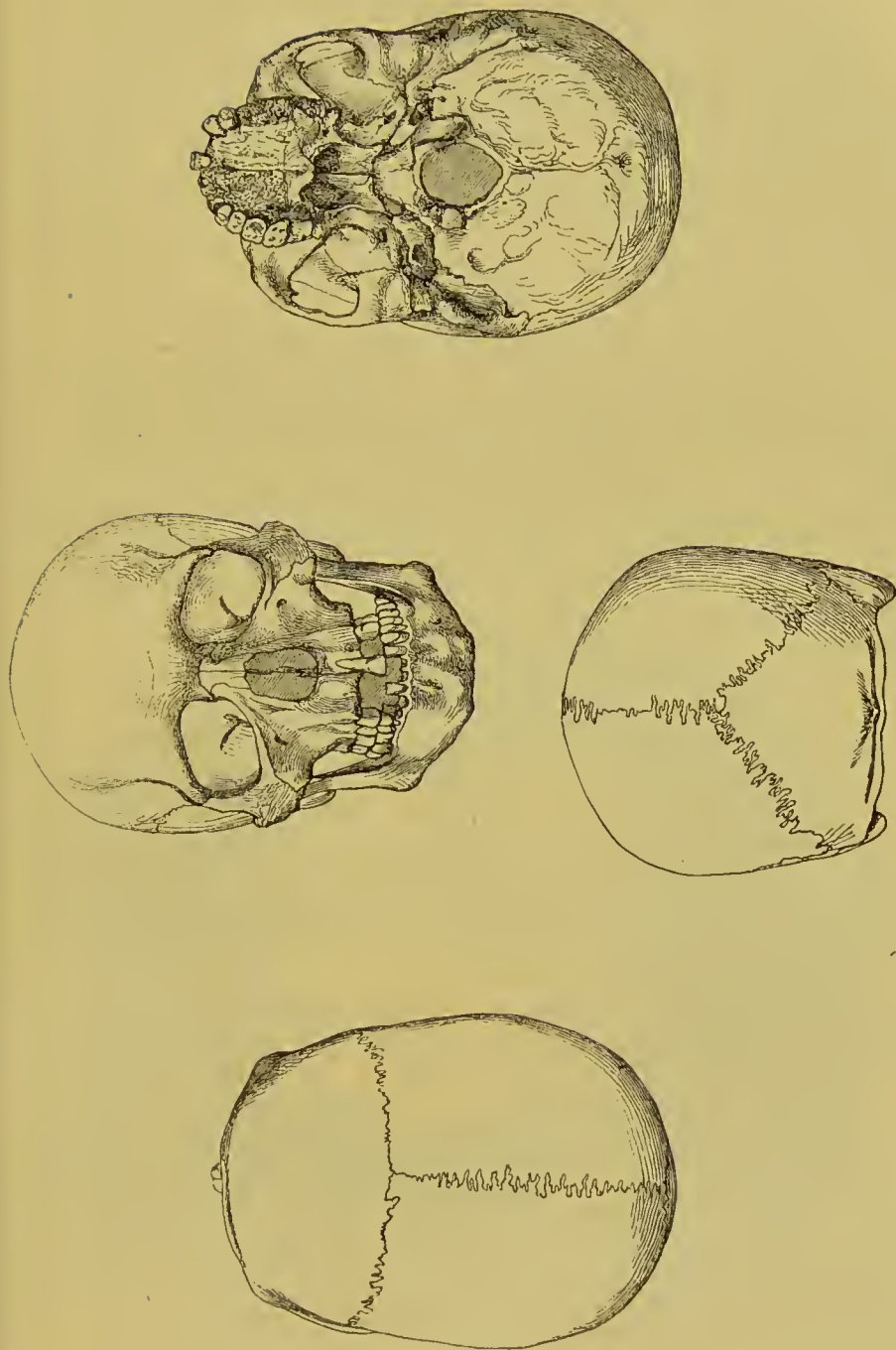


Fig. 14.—Cleft calvarium of a man, from the Long Barrow, Rodmarton.

This is in all probability the relic of a slave, sacrificed at the funeral rites.



Figs. 15-18.—Cranium of Ancient Briton, from Long Barrow at Rodmarton.—No. 1210.—Quarter-size.

16. 1298*. Ancient Briton. ♂, æt. c. 30.

A 90, B 21·8, C 16, *a* 5·5, *b* 4·8, *c* 5·7, D 15·3, E 8, F 5·6*p*, *a* 4·9, *b* 5·1, *c* 4·7, G 5·9, *a* 4·8, *b* 5·1, *c* 4·8, I 5·2, J 70, K 73.

This very large, even enormous, subsephoecephalic skull, the measurements of which I have taken from Table II. of the *Crania Britannica*, p. 242, where it stands No. XII., as the plaster cast is larger in all its dimensions than the cranium itself, was derived from a Long Barrow at Dinnington, near Rotherham, W. R. Yorkshire (region of BRIGANTES), opened in 1862. The femur, 18·2 in. long, had no certain connexion with this particular skull. *Mem. of the Anthropol. Soc.* vol. i. pp. 132 and 478. *Bull. de la Soc. d'Anthrop. de Paris*, vol. v. pp. 541, 578.

It is partly upon the series of skulls derived from the Rodmorton and Dinnington Barrows that Dr. THURNAM bases his hypothesis of two distinct races of Ancient Britons—an earlier, Stone age, dolichocephalic, and a later, Bronze age, brachycephalic race,—a hypothesis he has supported with great elaboration and ingenuity in three memoirs. In the first (*Nat. Hist. Rev.* 1865, p. 242), he contends that the synostosis so frequently seen in the longitudinal sutures of long skulls, especially between the parietals, is nothing less than a *race-character*; and in the two others, he maintains that the people of the stone age in Britain were a short, dolichocephalic race, who buried their dead in *dolichotaphic* barrows; whilst their successors of the bronze age, “the Celts” of many writers, were a tall, brachycephalic race, who interred their dead in *brachytaphic* barrows. The DOBUNI he regards as the representatives of the former, in the south-west of Britain, the BELGÆ of the latter. *Mem. of the Anthropol. Soc.* vol. i. pp. 120 and 459, with excellent figures of three Long-Barrow Skulls, pls. i., ii., iii., one of which is very brachycephalic, but said to be *secondary*.

From Dr. THURNAM.

17. 380. Ancient Caledonian, or Pict. ♀, æt. e. 50.

C 14·4, *a* 5, *b* 4·8, *c* 4·6, E 7, F *c* 4·5, G 5·5, *a* 4·5, *b* 4·7, *c* 4, H 4·7, K 64.

This regular, finely formed skull, with full occipital region, was found in a eist constructed of flagstones, 2 ft. 10 in. long, 1 ft. 8 in. wide, and 1 ft. 6 in. deep, on the hill of Roseile, near Elgin (region of SELGOVÆ), in 1857. Sixty-four oval beads and two quadrangular pieces of jet were the relics of her necklace. In the *Anthropological Review*, vol. ii. p. vi, there is an account of other eists and skulls found in the same neighbourhood, with figures.

Presented by Mr. J. TAYLOR, Elgin.

18. 548. Ancient Caledonian. ♀, æt. e. 17.

B 20·2, C 14·3, *a* 4·9, *b* 5·2, *c* 4·2, E 6·9, F 5·7*p*, *a* 5, *b* 5·4, *c* 4·7, G 5·4, *a* 4·7, *b* 4·8, *c* 3·8, H 4·6, J 82, K 78.

This capacious and beautiful skull of an ancient Caledonian maid, rivalling in its elegant proportions that of the Greek of BLUMENBACH (Tab. LI.), exhibits great breadth and height, and belongs decidedly to the brachycephalic series.

Found Feb. 1859, near Belmont Castle, Perthshire (region of VENICONTES), in a short stone cist, with the fragmentary remains of an older person, and an earthen vase ornamented all over by encircling and zigzag lines, and by stippling round the lip, both inside and out, 5·3 in. high, which contained a black greasy deposit.

Presented by THOS. ALEX. WISE, M.D., Belmont Castle, Perthshire.

19. 376. Ancient Orcadian. ♂, æt. c. 60.

A 83·2, B 21, C 15·5, *a* 5, *b* 5·5, *c* 5, D 15·6, E 7·1, F 5·9*p*, *a* 5·1, *b* 5·1, *c* 4·7, G 5·8, *a* 4·9, *b* 5·1, *c* 4·2, H 5, I 5·4, J·83, K·81.

This large brachycephalic skull belonged to one of two skeletons, contained in the lower cell of a complex flagged cist, found at Newbigging, near Kirkwall, in 1855.

Crania Britannica, Pl. 21 and Description.

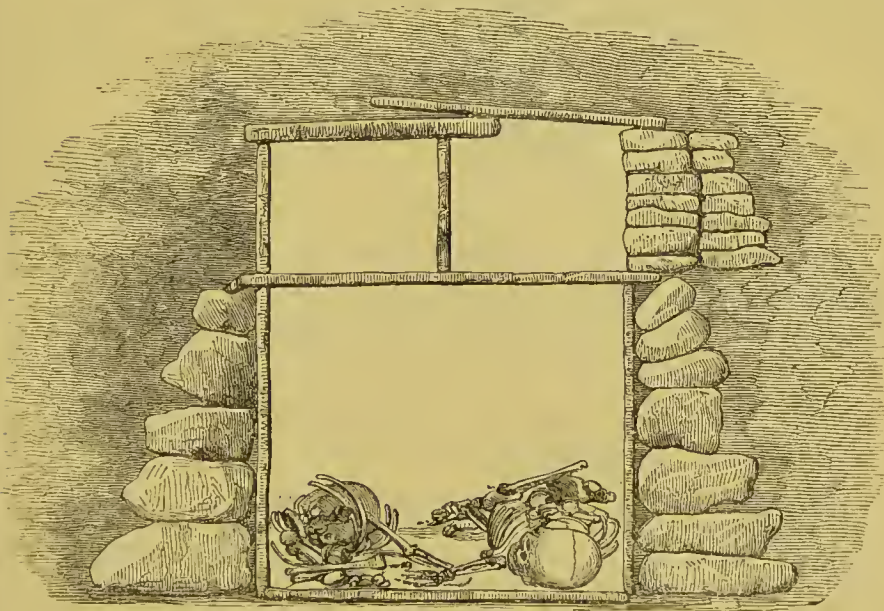
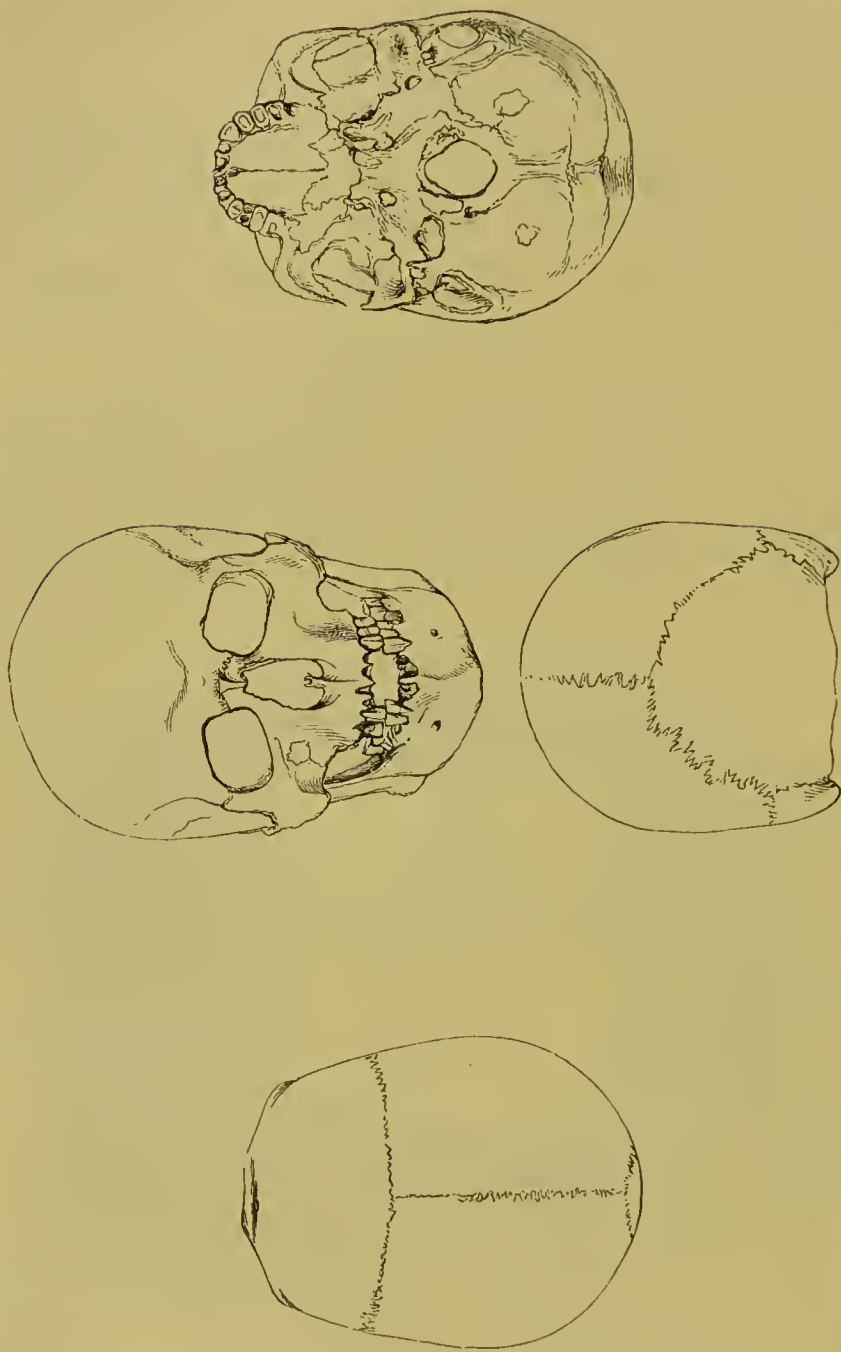


Fig. 19.—Section of Newbigging Barrow and Cists, with Skeletons in situ.

20. 582. Ancient Orcadian. ♂, æt. c. 40.

B 21·1, C *a* 4·9, *b* 5·2, D 15, E 7·5, F 5·8*t*, *a* 4·8, *b* 5·3, *c* 4·6, G 5·2, *a* 4·8, *b* 4·9, *c* 4·3, H 5, J·77, K·65.

This oval dolichocephalic skull is from a short flagged cist, found at Townhill, near Kirkwall, May 1859.



Figs. 20-23.—Cranium of Ancient Orcadian, from Neubigging Cist.—No. 376.—Quarter-size.

21. 583. Ancient Orcadian. ♀, æt. c. 60.

B 20·5, C 14·5, E 7·2, F 5·8 *p*, *a* 4·9, *b* 5·7, *c* 4·4, G 5·2, *a* 4·7, *b* 4·6, *c* 3·8, H 4·4, J ·80, K ·72.

This brachycephalic skull, wide behind, was found in a large flagged eist, which contained two skeletons, in the parish of Rindall, Island of Pomona, July, 1859. The teeth are greatly worn down, but all have been present at death.

22. 584. Ancient Orcadian. ♀, æt. e. 70. Calv.

B 20, C 14, *a* 5·1, *b* 5, *c* 3·9, D 13·6, E 7·1, F 5·4 *p*, *a* 4·6, *b* 5·2, *c* 4, G 4·9, *a* 4·7, *b* 4·6, *c* 3·8, I 4·9, J ·76, K ·69.

From another eist, which also contained an interment by cremation, near No. 583.

Nos. 376–584 presented by Mr. GEO. PETRIE, Corr. Memb. S. A. Scot.

23. 770. Ancient Hebridean. ♂, æt. ultra 70. Calv.

B 21·7, C 15·5, *a* 4·9, *b* 5·5, *c* 5·1, D 15, E 7·2, F 6 *t*, *a* 4·8, *b* 5·4, *c* 4·9, G 5·5, *a* 4·9, *b* 5, *c* 4·4, J ·83, K ·76.

This capacious yet brachycephalic calvarium was derived from the cromlech of "Sianborve" in the island of Benbecula, Hebrides, Feb. 1861¹.

Crania Britannica, Plate 48 and Deser.

24. 771. Ancient Hebridean. ♂, æt. ultra 70. Calv.

A 66, B 20·9, C 15·1, *a* 5, *b* 5·1, *c* 5, D 14·7, E 7·4, F 5·6 *p*, *a* 4·9, *b* 5·4, *c* 4·3, G 5, *a* 4·6, *b* 4·7, *c* 4·2, J ·75, K ·67.

A thick, heavy, oval calvarium from a stone eist, 3 ft. 3 in. by 2 ft. 6 in., in the island of Bernera, Hebrides, opened Feb. 1861.

Nos. 770 and 771 from Rev. JNO. N. M'DONALD, Harris, who encountered great difficulties in procuring them.

25. 177*. Ancient Hibernian. ♂. Calv.

B 20·2, C 14·8, E 7, F 5·8, G 5·4, J ·82, K ·77.

¹ "The west side of the island terminates in a cape, called the Point of Sian. Sian itself is a green hillock which slopes gently towards the shore, and at some time formed itself at the top into the conical tumulus which enclosed the cromlech. The latter consisted of three or four slabs of stone raised on their sides, over which was placed the capstone. *Borve* means fertile or cultivated. It should be pronounced *borgh*, and is the same as burgh, borough, &c. *Sian* is pure Celtic, and its very sound speaks of superstition. It means the abode of *the men of peace*, who, though usually identified with, are very different from the well-known fairies, and by usage has come to mean a conical hillock. It would be waste of time to detail the experiences of those recorded by tradition as having seen this Sian open, and had their mortal eyes dazzled by the brilliant illumination of the interior, and their ears glugged by the ever-flowing strains of the most heavenly music, or of others who found it as difficult to resist entering as if the sirens themselves held a jubilee within, but to find on coming out again that the few hours they fancied they had spent within were as many long years."—Rev. J. N. M'DONALD.

A brachycephalic calvarium of an ancient Hibernian, derived from a Kistvaen at Donaghmore (region of RHOBODH), co. Tyrone, Ulster, accompanied with an urn.

RETZIUS, *Ethnolog. Schriften*, pl. vi. fig. iii. This latter is the skull represented in Pl. 55 of the *Crania Britannica*, and of which the outline figures are introduced here.

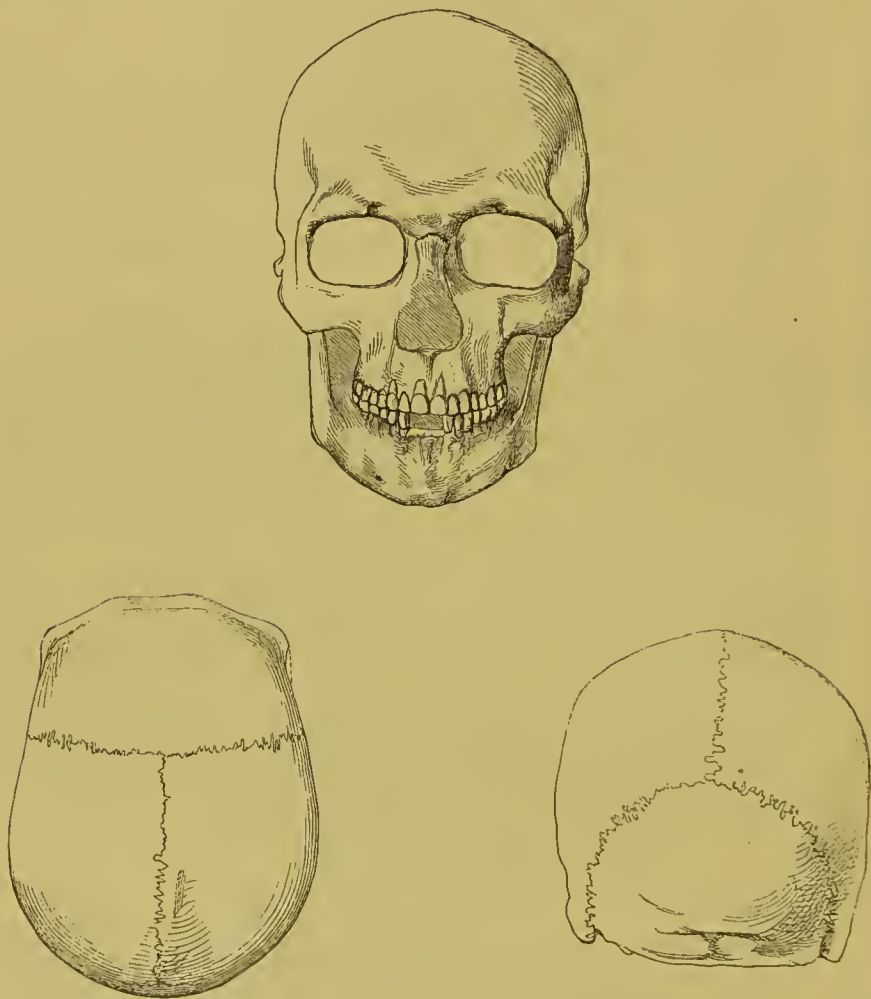


Fig. 24-26.—Cranium of Ancient Hibernian, from Cist in Phoenix Park, Dublin.—Quarter-size.

Average Measurements of Ancient British Skulls.

13 ♂, A 76·3, B 20·8, C 14·9, a 5, b 5·2, c 4·7, D 15, E 7·2, F 5·7, a 4·8, b 5·4, c 4·6, G 5·3, a 4·6, b 4·9, c 4·1, H 4·7, I 5·4, J 7·9, K 7·3.

4 ♀, B 20, C 14·2, *a* 4·9, *b* 5, *c* 4·2, D 13·6, E 7, F 5·5, *a* 4·6, *b* 5·3, *c* 4·4, G 5·2, *a* 4·6, *b* 4·7, *c* 3·9, H 4·6, I 4·9, J ·79, K ·70.

17 ♂ and ♀, A 76·3, B 20·4, C 14·5, *a* 4·9, *b* 5·1, *c* 4·5, D 14·3, E 7·1, F 5·6, *a* 4·7, *b* 5·3, *c* 4·5, G 5·2, *a* 4·6, *b* 4·8, *c* 4, H 4·6, I 5·1, J ·79, K ·71.

A varies from 66 to 83; J from ·73 to ·87; K from ·67 to ·81. Five of thirteen male skulls are brachycephalic, and one doubtful; two of the female skulls are brachycephalic.

In Tables I. and II. of the *Crania Britannica* the average measurements of a much larger number of ancient British skulls are calculated. These agree much with those given above.

The following crania are undoubtedly ancient, but they belong to a different category from the preceding skulls of aboriginal people. The antiquity of those now to be enumerated is not so assured and not so remote; still it is great and unquestionable. I have preferred naming them "Ancient Scottish," to distinguish them from the preceding, but cannot be so certain of their lineage.

26. 479. Ancient Scottish. ♀, æt. c. 35.

B 20, C 14·6, *a* 5, *b* 4·9, *c* 4·7, D 14·5, E 7·1, F 5·5 *p*, *a* 4·9, *b* 5·4, *c* 4·2, G 5·3, *a* 4·8, *b* 4·8, *c* 4, H 4·5, J ·77, K ·74.

A beautiful and well-proportioned skull of a handsome woman, remarkable for the shortness of the nasal bones, ·5 in., and the squareness of the nasal orifice. This form of orifice is not embraced in Dr. WILLIAMSON'S figures¹; for it is slightly wider at the lower part of the upper third than at the floor of the nostrils.

27. 480. Ancient Scottish. ♀, æt. c. 55. Imperf. calv.

B 21·3, C 15·2, *a* 5·2, *b* 5·2, *c* 4·8, E 7·6, F 5·6 *t*, *a* 4·8, *b* 5·2, *c* 4·1, G 5·1, J ·73, K ·67.

Frontal suture remaining.

28. 481. Ancient Scottish. ♀, æt. c. 7. Imperf. calv.

The two latter are posthumously distorted.

The remains of these three females, Nos. 479-481, and of another child were discovered in a subterranean structure in the Hill of Dunsinnan, Perthshire ("high Dunsinane hill"), in 1854. They were met with in a kind of passage between two apartments, and seemed to have been in a crouching position. The condition of the bones proves their great antiquity. CHALMERS, *Caledonia*, vol. i. p. 413. *Proc. Soc. Antiq. S.* vol. ii. p. 93.

Presented by J. M. NAIRNE, Esq., Laird of Dunsinnan, and THOS. A. WISE, M.D.

¹ *Observations on the Human Crania in the Fort Pitt Museum*, 1857.

29. 761. Ancient Scottish. ♂, æt. e. 55.

A 62·5, B 20·3, C 14·4, *a* 4·8, *b* 5, *c* 4·6, D 14·7, E 7, F 5·7 *t*, *a* 4·4, *b* 5·3, *c* 4·4, G 5·3, *a* 4·6, *b* 4·6, *c* 3·9, H 4·1, I 5, J ·81, K ·75.

A small, thick and heavy, brachycephalic skull of a man, having an aboriginal aspect, found extended *on the bottom of a rude cist* formed of undressed flags, on the Kirkhill, St. Andrews.

30. 762. Ancient Scottish. ♂, æt. e. 75.

A 74, B 21·5, C 15, *a* 4·9, *b* 5, *c* 5·1, D 15·4, E 7·3, F 6·1 *t*, *a* 5, *b* 5·8, *c* 4·5, G 5·4, *a* 4·6, *b* 4·8, *c* 4, H 4·8, I 5·2, J ·83, K ·74.

A brachy-platycephalic skull of an aged man, with frontal suture and very deep cheek-depressions, found *in a rude cist* near the last.

31. 763. Ancient Scottish. ♂, æt. e. 35.

A 77·5, B 21, C 14·8, *a* 5, *b* 5, *c* 4·8, D 15·6, E 7·1, F 6 *t*, *a* 5, *b* 5·6, *c* 4·7, G 5·5, *a* 4·8, *b* 5, *c* 4·2, H 5·1, I 5·6, J ·84, K ·77.

A very fine large brachycephalic skull, the short sagittal suture of which is nearly ossified, prematurely. Parietal foramina present. The teeth are all in their places, save the middle lower incisor, on the left side, probably wanting congenitally, and are in excellent condition, being only moderately worn. The face is long and has obviously been handsome, the nasal bones long and slender, descending without supranasal depression, and the nostrils narrow. It belonged to the skeleton of a man, found extended on the back *in a grave*. It presents an injury, with much loss of substance, produced during life, on the right side of the frontal bone, extending through the coronal suture.

32. 764. Ancient Scottish. ♀, æt. e. 30.

A 72, B 20·1, C 14·3, *a* 4·8, *b* 4·8, *c* 4·7, D 14·4, E 7, F 5·4, *a* 4·6, *b* 5, *c* 4·1, G 5·3, *a* 4·5, *b* 4·6, *c* 3·7, H 4·6, I 5, J ·77, K ·75.

This well-formed skull of a beautiful young woman, having a rather long and delicate face, and long nasal bones, is derived from a skeleton which was laid on its left side, to the right of the last, *in the same grave*.

The four crania Nos. 761–764 were obtained in excavations, made in 1860, on the hill called the Kirkheugh, at St. Andrews, Fifeshire. They are of considerable antiquity. The first two probably belong to pre-Christian times, perhaps the sixth century. The two last are most likely the relics of a man and his wife, two fine young people, *early Culdees*. Who can say that the terrific accident which has occurred to the husband may not have brought them both sorrowing to an early tomb!

It is not unworthy of remark that Nos. 761 and 762, *from cists*, might readily be taken for the skulls of aboriginal Caledonians; whilst a practised eye would at once discriminate Nos. 763–764,

(*from graves*) as belonging to a very different series, probably Scandinavian or Anglo-Saxon. They are certainly not aboriginal. Although No. 763 is brachycephalie, like the two from cists which preceede it, yet it could not be mistaken for an aboriginal skull, chiefly from the features of its faeial bones. *Observations upon sixteen Human Skulls found in Excavations made on the Kirkhill, St. Andrews*, 1860. By J. BARNARD DAVIS, Edin. New Phil. Journ. new series, Oct. 1861.

33. 986. Ancient Scottish. ♀, æt. e. 60. Calv. D.C.
A 68, B 20·6, C 14, a 4·8, b 4, c 5·2, D 13·4, E 7·2, F 5·4 t, a 4·6,
b 4·9, c 4·1, G 4·8, a 4, b 4·5, c 4·5, J ·75, K ·66.

A small platyecephalie calvarium said to be derived from the vicinity of the Antonine Wall.

Average Measurements of Ancient Scottish Skulls.

- 3 ♂, A 71·3, B 20·9, C 14·7, a 4·5, b 5, c 4·8, D 15·1, E 7·1,
F 5·9, a 4·8, b 5·5, c 4·5, G 5·4, a 4·6, b 4·8, c 4·4, H 4·6,
I 5·2, J ·83, K ·75.
4 ♀, A 70, B 20·5, C 14·5, a 4·9, b 4·7, c 4·8, D 14·1, E 7·2,
F 5·4, a 4·7, b 5·1, c 4·1, G 5·1, a 4·4, b 4·6, J ·75, K ·70.
7 ♂ and ♀, A 70·6, B 20·7, C 14·6, a 4·7, b 4·8, c 4·8, D 14·6,
E 7·1, F 5·6, a 4·7, b 5·2, c 4·3, G 5·2, a 4·5, b 4·7, c 4·4,
H 4·6, I 5·2, J ·79, K ·72.

34. 178*. Ancient Hibernian. ♂. Imperf. calv.
B 21·4, C 15·1, a 5·2, b 5·5, c 4·4, D 15·5, E 7·4, F 6 p, a 4·9, b 5·3,
c 5, G 5·2, J ·81, K ·70.

35. 179*. Ancient Hibernian. ♀. Imperf. calv.
B 20·5, C 14·2, a 4·7, b 5, c 4·5, D 14, E 7·1, F 5·7 t, a 4·5, b 5·2,
c 4·6, G 5·3, J ·80, K ·74.

36. 180*. Ancient Hibernian. ♀. Imperf. calv.
E 7, F 5·1 p, J ·72·8.

Nos. 178* to 180* were found deeply imbedded in the Black-water River, co. Armagh, associated with four ancient canoes. It is worthy of remark that two out of the three are brachycephalie. Presented by Mr. JOHN GRATTAN, Belfast.

2. *Ancient Roman.*

1. 58. Ancient Roman. ♂, æt. e. 60. Imperf. calv. E.B.P.
B 21·5, C 16, a 5·5, b 5·6, c 4·9, D 15·5, E 7·8, F 5·4 t, a 4·6,
b 5·3, c 4·5, G 5·2, a 5, b 5·1, c 3·7, J ·69, K ·66.

An unusually long calvarium for that of a Roman; but the sagittal and lambdoidal sutures are prematurely obliterated.

2. 59. Ancient Roman. ♂, æt. e. 60. Imperf. calv. E.B.P. B 20·8, C 15, *a* 5·1, *b* 4·9, *c* 5, D 14·5, E 7·4, F 5·5 *p*, *a* 4·9, *b* 5·1, *c* 4·2, G 5·2, *a* 4·7, *b* 4·8, *c* 4·2, J 7·4, K 7·0.

Nos. 58 and 59 were found at "the Roman level," 16 ft. deep, in Kent Street, Borough, London, in 1847, the site of one of the cemeteries of *Londinium*.

3. 168. Ancient Roman. ♀, æt. e. 30. A 64, B 19·8, C 14·6, *a* 5·1, *b* 4·6, *c* 4·9, D 13·6, E 7·2, F 5·3 *p*, *a* 4·2, *b* 5·1, *c* 4·3, G 5·1, *a* 4·4, *b* 4·5, *c* 4·1, H 4·3, I 4·9, J 7·3, K 7·0.

168 A. *Ossa innominata* of the skeleton.

4. 169. Ancient Roman. ♂, æt. e. 50. Imperf. calv. A 64, B 20·9, C 14·7, *a* 5, *b* 4·8, *c* 4·9, D 14·8, E 7·3, F 5·8 *t*, *a* 4·9, *b* 5·5, *c* 4·4, G 5·3, *a* 4·4, *b* 4·8, *c* 4·4, J 7·9, K 7·2.

168 and 169 from graves discovered in 1853, at the Bartlow Hills, Essex.

Presented by Hon. R. C. NEVILLE, F.S.A.

Crania Britannica, Pl. 30 and Description.

5. 170. Ancient Roman. ♂, æt. e. 60. A 67, B 20·5, C 14·5, *a* 5, *b* 4·9, *c* 4·6, D 14·5, E 7·3, F 5·5 *p*, *a* 4·9, *b* 5·4, *c* 4·3, G 5·1, *a* 4·6, *b* 4·6, *c* 4·1, H 4·5, I 5·1, J 7·5, K 6·9.

Found, in March 1852, at Kingsholm, Gloucester (*Glevum*, a Roman colony), with Roman coins, urns, &c.

Crania Britannica, Pl. 36 and Description.

6. 171. Ancient Roman. ♂, æt. e. 70. A 70, B 20·7, C 14·5, *a* 5, *b* 4·5, *c* 5, D 14·2, E 7·2, F 5·6 *t*, *a* 4·8, *b* 5·4, *c* 4·5, G 4·9, *a* 4·5, *b* 4·5, *c* 4·1, H 4·4, I 4·7, J 7·6, K 6·7.

Also from Kingsholm.

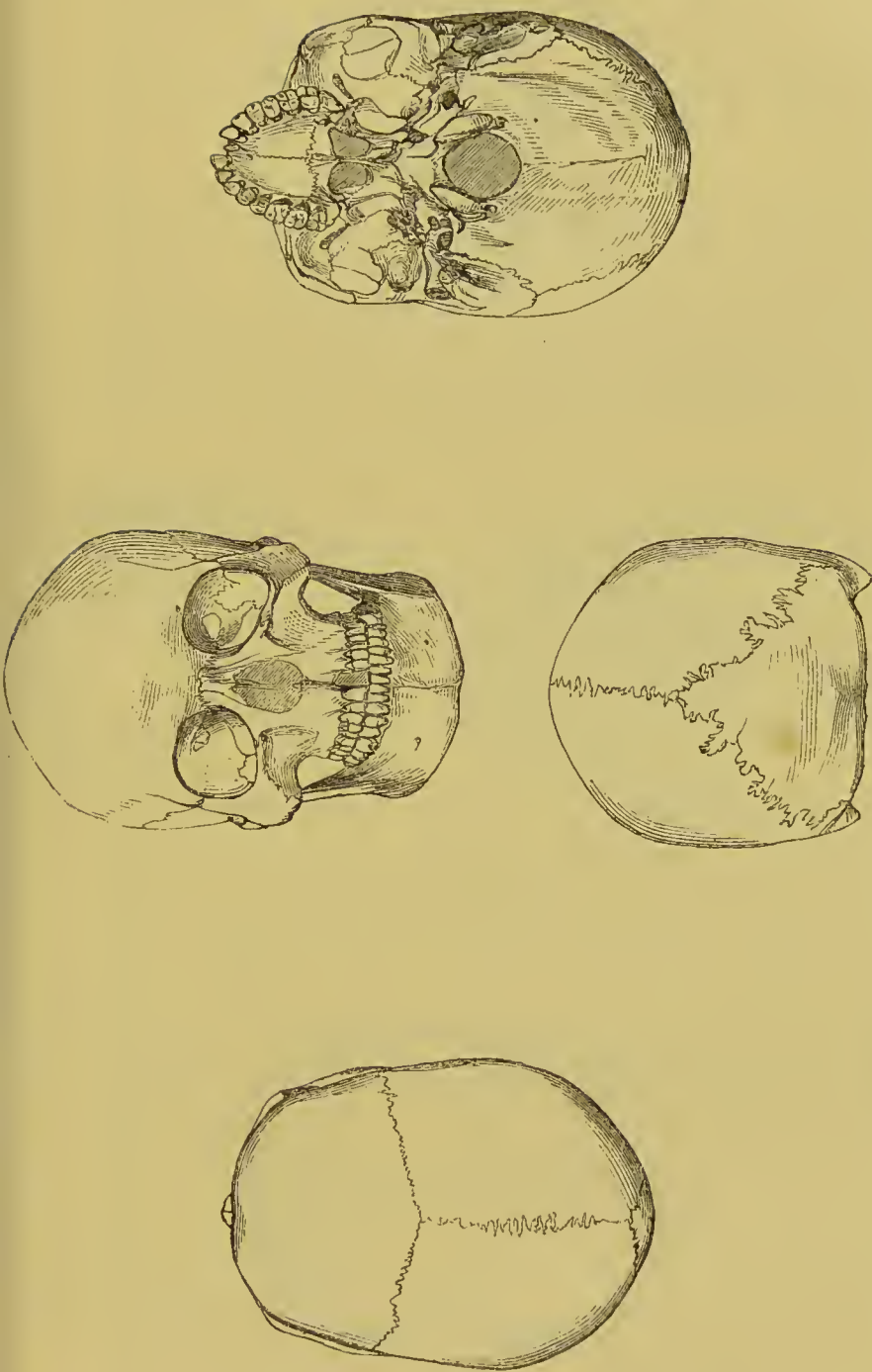
Nos. 170 and 171, both small skulls, yet most likely those of men, are nevertheless both characteristically Roman.

No. 171 presented by Mr. J. Y. AKERMAN, F.S.A.

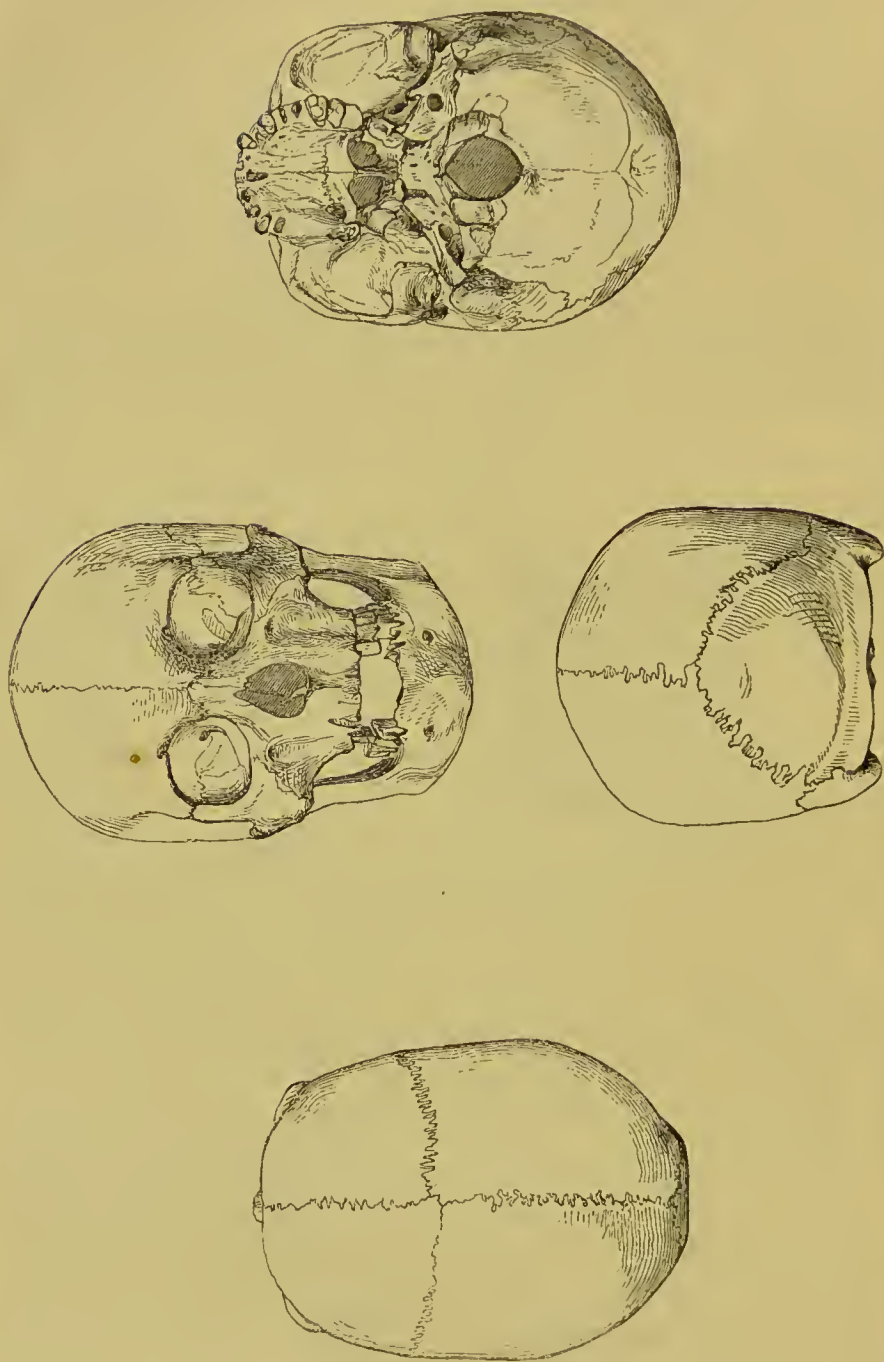
7. 172. Ancient Roman. ♀, æt. e. 70. Imperf. cran. B 20·2, C 14·4, *a* 5, *b* 5, *c* 4·4, D 14·8, E 7·1, F 5·6 *p*, *a* 4·5, *b* 5·4, *c* 4·4, G 5·5, *a* 4·9, *b* 4·9, *c* 4·6, H 4·5, J 7·9, K 7·7.

This fine skull has a paramastoid process on the left side, ·7 in. long, which presents an articular surface for connexion with the atlas.

Found, in March 1854, in a Roman cemetery, near Lincoln, and presented by Rev. Ed. TROLLOPE.



Figs. 27-30.—Cranium of Ancient Roman Woman, from Grave, Bartlow Hills.—No. 168.—Quarter-size.



Figs. 31-34.—Cranium of Ancient Roman, from Grave at Kingsholm.—No. 170.—Quarter-size.

8. 214. Ancient Roman. ♂, æt. c. 35. Imperf. cran.

B 21·1, C 15, *a* 5·1, *b* 5·1, *c* 4·8, E 7·4, F 5·5 *t*, *a* 4·5, *b* 5·3, *c* 4·4, G 5·6, *a* 4·6, *b* 4·9, *c* 4·4, H 4·8, J ·74, K ·75.

Found at the foot of the Roman wall of *Eburacum* (York), during exeavations.

9. 215. Ancient Roman. ♂, æt. c. 25.

A 82, B 21·5, C 14·7, *a* 5·2, *b* 5, *c* 4·5, D 14·9, E 7·3, F 6·1 *p*, *a* 5·1, *b* 5·5, *c* 4·5, G 5, *a* 4·5, *b* 4·6, *c* 4·3, H 5·1, I 5·2, J ·83, K ·68.

This large brachy- and platyeephalie eranium, with wide and low forehead, is remarkably eharacteristic in Roman features.

Found, in 1855, near Coney Street, York (*Eburacum*), at a depth of 10 ft., with two urns, Samian ware, and other Roman remains.

10. 216. Ancient Roman. ♂, æt. c. 55.

A 65, B 20·1, C 13·8, *a* 4·9, *b* 4·5, *c* 4·4, D 14·1, E 7, F 5·6 *t*, *a* 4·5, *b* 4·8, *c* 4·4, G 4·9, *a* 4·5, *b* 4·5, *c* 3·9, H 4·4, I 5·3, J ·80, K ·70.

This small brachyeephalie skull, very closely resembling Nos. 170 and 171, from *Glevum*, was found in 1854, in Petergate, York, not far from the south entrance into the Minster, at a depth of 12 feet. Roman antiquities have been frequently discovered at this spot.

11. 395. Ancient Roman. ♂, æt. e. 60. Grave No. 17.

A 81·5, B 21·9, C 15·6, *a* 5·2, *b* 5·2, *c* 5·2, D 14·6, E 7·8, F 5·8 *t*, *a* 4·9, *b* 5·4, *c* 4·3, G 5·3, *a* 4·6, *b* 4·7, *c* 4·3, H 4·8, I 5·3, J ·74, K ·68.

A large and massive, platyeephalie, typieal Roman skull.

12. 396. Ancient Roman. ♀, æt. c. 70. Grave No. 11. Imperf. eran.

A 73·5, B 21·2, C 15·6, *a* 5·5, *b* 5·5, *c* 4·6, D 14·5, E 7·4, F 5·6 *p*, *a* 4·8, *b* 5·1, *c* 4·4, G 5·3, *a* 4·7, *b* 4·8, *c* 4·3, J ·75, K ·71.

13. 397. Ancient Roman. ♀, æt. e. 8. Grave No. 18. Imperf. eran.

14. 398. Ancient Roman. ♀, æt. c. 40. Grave No. 30. Imperf. eran.

B 20, C 14·5, D 13·9, E 7·2, F 5·3 *t*, *a* 4·8, *b* 4·7, *c* 4·3, G 5·2, *a* 4·5, *b* 4·7, *c* 4, H 4·6, J ·73, K ·72.

15. 399. Ancient Roman. ♂, æt. e. 50. Grave No. 41.

B 21·9, C 15·7, *a* 5·1, *b* 5·1, *c* 5·5, D 15·5, E 7·6, F 6·1 *t*, *a* 5·1, *b* 5·6, *c* 4·8, G 5·3, *a* 4·5, *b* 4·9, *c* 4·7, H 4·9, I 5·6, J ·80, K ·70.

A eapacious brachyeephalie and eharacteristic Roman skull.

Nos. 395–399 from a tumular cemetery on White Horse Hill, Berks., opened 1857. Presented by JNO. THURNAM, M.D.

Crania Britannica, Pl. 51 and Description. At p. (2) is a plan of the cemetery with the graves numbered.

16. 580. Ancient Roman. ♂, æt. c. 45. Calv.

A 75·5, B 21·2, C 14·9, *a* 5·1, *b* 5·1, *c* 4·7, D 14·7, E 7·4, F 5·6 *p*,
a 4·9, *b* 5·2, *c* 4·2, G 5·2, *a* 4·7, *b* 4·8, *c* 4·2, I 5·3, J 7·5, K 7·0.

From an inscribed stone coffin found at York (*Eburacum*), Sept. 21, 1859.

17. 1309. Ancient Roman. ♂. Imperf. calv.

A 81·5, B 21, C 15·6, *a* 4·9, *b* 5·6, *c* 5·1, D 15·2, E 7·3, F 5·7 *p*,
a 4·6, *b* 4·9, *c* 4·4, G 5·7, *a* 4·7, *b* 5, *c* 4·3, J 7·8, K 7·8.

This calvarium is remarkable for having a small paramastoid process on each side. They are slender and conical, each about a quarter of an inch in length.

Exhumed in 1864, at the edge of a chalk-pit called the Devil's Court Hall, Redlands, near Canterbury.

Presented by Mr. JNO. BRENT, Jun.

Average Measurements of Ancient Roman Skulls.

11 ♂, A 72, B 21·1, C 14·9, *a* 5·1, *b* 5, *c* 4·9, D 14·7, E 7·4, F 5·7,
a 4·8, *b* 5·3, *c* 4·4, G 5·2, *a* 4·6, *b* 4·7, *c* 4·2, H 4·7, I 5·2,
J 7·7, K 7·0.

3 ♀, A 68, B 20·4, C 14·8, *a* 5·2, *b* 5, *c* 4·6, D 14·3, E 7·2, F 5·5,
a 4·5, *b* 5·2, *c* 4·3, G 5·3, *a* 4·6, *b* 4·7, *c* 4·3, J 7·6, K 7·3.

14 ♂ and ♀, A 71·3, B 20·9, C 14·6, *a* 5·1, *b* 5, *c* 4·7, D 14·5,
E 7·3, F 5·6, *a* 4·6, *b* 5·2, *c* 4·3, G 5·2, *a* 4·6, *b* 4·7, *c* 4·2,
H 4·7, I 5·2, J 7·6, K 7·1.

In the males A varies from 64 to 82; J from 69 to 83; K from 66 to 75; three are brachycephalie. In the females the extremes are J 73–79; K 70–77. All are dolichocephalie save three.

2 a. Romano-British Skulls.

1. 182. Romano-Briton. ♀, æt. c. 25. Calv.

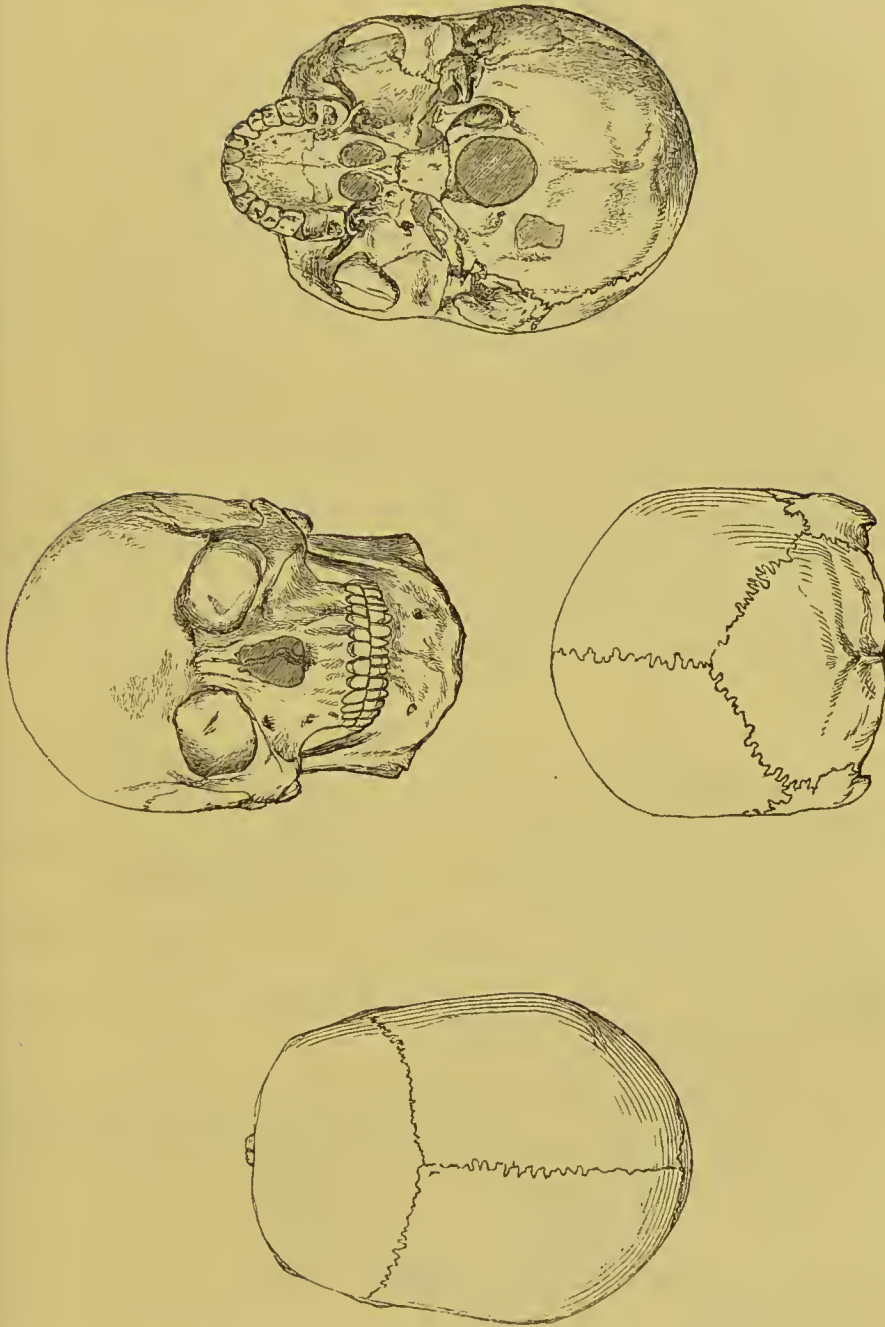
A 71, B 20, C 14·8, *a* 4·8, *b* 5·2, *c* 4·8, E 7·3, F 5·2 *p*, *a* 4·3,
b 5·1, *c* 4·1, G 5·5, *a* 4·6, *b* 4·8, *c* 4·3, J 7·1, K 7·5.

A dolichocephalic calvarium.

2. 217. Romano-Briton. ♀, æt. e. 16. Calv.

A 85, B 21, C 15·2, *a* 5·1, *b* 5·4, *c* 4·7, D 15·1, E 7·3, F 5·9 *p*,
a 5·3, *b* 5·7, *c* 4, G 5·5, *a* 4·9, *b* 5·1, *c* 4·3, J 8·0, K 7·3.

The lambdoidal suture presents a congeries of triquetral bones.



Figs. 35-38.—Cranium of an Ancient Roman, from Cemetery on White Horse Hill.—Quarter-size.

This very large and unusually platy- and dolichocephalic calvarium is probably hydrocephalic.

3. 218. Romano-Briton. ♂. Imperf. calv.

A 65, B 20·1, C 13·8, *a* 4·4, *b* 4·2, *c* 5·2, D 13·8, E 7·2, F 5·6 *t*,
a 4·6, *b* 5·2, *c* 4·4, G 4·9, *a* 4·4, *b* 4·7, *c* 4·5, J ·77, K ·68.

4. 458. Romano-Briton. ♀, æt. c. 30. Imperf. calv.

A 71·5, B 20·4, C 14·4, *a* 5, *b* 5, *c* 4·4, D 14·2, E 7·2, F 5·5 *p*,
a 4·9, *b* 5·2, *c* 4·1, G 4·8, *a* 4·8, *b* 4·6, *c* 3·8, J ·76, K ·66.

A small platycephalic calvarium, agreeing with 217, especially in the low quadrangular forehead.

5. 459. Romano-Briton. ♀, æt. c. 40. Imperf. calv.

B 19·8, C 14·5, *a* 5, *b* 5, *c* 4·5, E 7, F *a* 4·5, *b* 4·8, *c* 4·1, G 5·5,
K ·78.

Nos. 182 to 459 were found in the Thames—I believe, near Battersea Bridge, where many ancient British antiquities have been met with. The calvaria which I have designated “Romano-British” are of doubtful ethnic origin. I consider that not one of them is purely British; 217 and 458 may be purely Roman.

3. *Anglo-Saxon.*

1. 40. Anglo-Saxon. ♂, æt. c. 50. “East Angle.” (Mr. NEVILLE’S Grave, No. 19.) Imperf. cran.

B 20·9, C 14·7, *a* 4·9, *b* 5·1, *c* 4·7, D 14·3, E 7·4, F 5·3 *p*, *b* 5,
c 4·1, G 5·2, *a* 4·7, *b* 4·7, *c* 4·1, H 4·5, J ·71, K ·70.

2. 41. Anglo-Saxon. ♀, æt. c. 60. “East Angle.” (No. 20.) Imperf. cran.

B 20·3, C 14·2, *a* 5, *b* 5, *c* 4·2, E 7·2, F 5·3 *p*, *a* 4·4, *b* 5, *c* 4·4,
G *a* 4·6, *b* 4·9, *c* 4·3, J ·73.

3. 42. Anglo-Saxon. ♀, æt. c. 45. “East Angle.” (No. 21).
A 63, B 19·8, C 14·5, *a* 5, *b* 5, *c* 4·5, D 13·4, E 7·1, F 5·3 *p*, *a* 4·8,
b 4·9, *c* 4·3, G 5·1, *a* 4·5, *b* 4·5, *c* 3·7, H 4·2, I 4·7, J ·74, K ·71.

Has a frontal suture.

4. 43. Anglo-Saxon. ♂, æt. c. 30. “East Angle.” (No. 25.) Imperf. cran.

B 21, C 15·2, *a* 5·4, *b* 5·4, *c* 4·4, E 7·4, F *a* 4·8, *b* 5·3, G *a* 4·8,
b 4·8, *c* 4, H 4·4.

5. 44. Anglo-Saxon. ♀, æt. c. 60. “East Angle.” (No. 32). Imperf. cran.

B 19·7, C 14·2, *a* 4·8, *b* 4·7, *c* 4·7, D 14·6, E 6·8, F 5·5 *p*, *a* 4·6,
b 5·2, *c* 4·4, G *a* 4·7, *b* 4·8, *c* 4·3, H 4·3, J ·81.

6. 45. Anglo-Saxon. ♀, æt. c. 60. "East Angle." (No. 37.)
Imperf. cran.

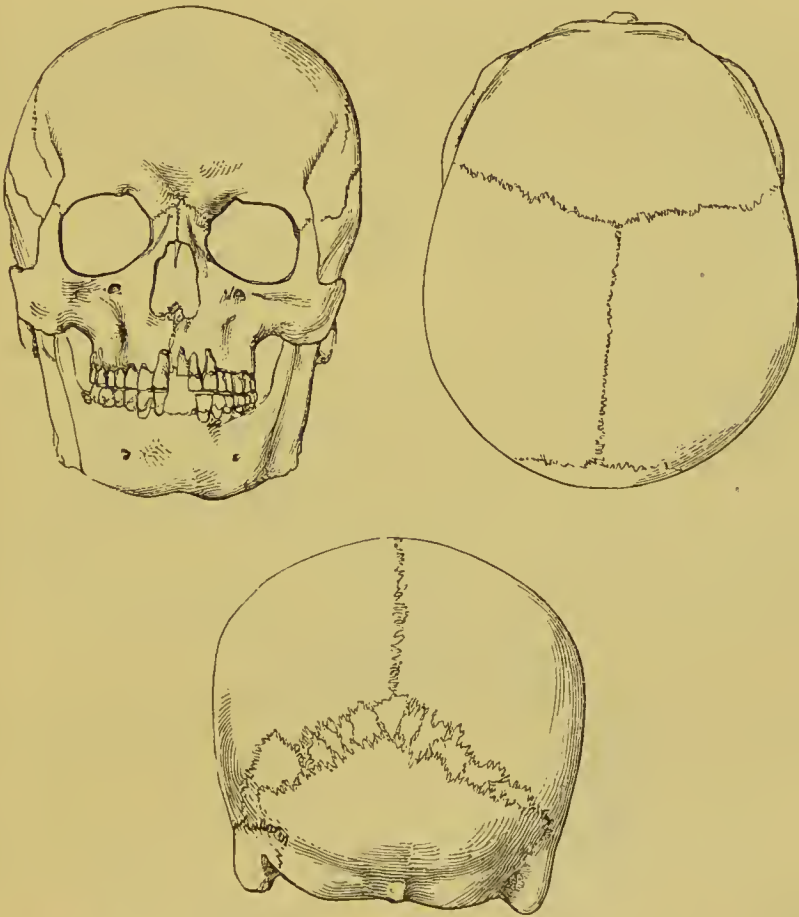
B 20·1, C 14, *a* 4·9, *b* 4·7, *c* 4·4, D 13·3, E 7, F 5·1 *p*, *a* 4·6,
b 4·6, *c* 4, G 5, *a* 4·4, *b* 4·4, *c* 3·8, H 4·2, J ·73, K ·71.

7. 47. Anglo-Saxon. ♂, æt. c. 20. "East Angle." (No. 28.)

B 21·1, C 15·4, *a* 5·2, *b* 4·9, *c* 5·3, D 15·1, E 7·2, F 6 *t*, *a* 4·8,
b 5·1, *c* 4·2, G 5·2, *a* 4·5, *b* 4·9, *c* 4·3, H 4·6, J ·83, K ·72.

8. 49. Anglo-Saxon. ♂, æt. c. 50. "East Angle." (No. 85.)

A 61, B 19·3, C 14·4, *a* 4·3, *b* 4·8, *c* 5·3, D 14, E 6·9, F 5·2 *p*, *a* 4·4,
b 5·1, *c* 4·4, G 5·3, *a* 4·4, *b* 4·6, *c* 4·3, H 4, I 4·9, J ·75, K ·76.



Figs. 39-41.—Cranium of an *East Angle*, from *Linton Heath Cemetery*.—Quarter-size.

9. 672. Anglo-Saxon. ♂, æt. c. 60. "East Angle."

A 80, B 21·5, C 15·2, *a* 5, *b* 5·7, *c* 4·5, D 14·8, E 7·7, F 5·8 *t*, *a* 4·7,
b 5·2, *c* 4·4, G 5·5, *a* 4·7, *b* 4·7, *c* 4·3, H 4·8, I 5·5, J ·75, K ·71.

A large dolichocephalic skull with a remarkably prominent nose.

Crania Britannica, Pl. 46.

Nos. 40 to 672 present a good deal of variety. Nos. 44 and 47 are decidedly brachycephalic. Nos. 45 and 672 as decidedly long. Except Nos. 43, 47, and 672, they are not very favourable specimens of the Anglo-Saxon skull.

Nos. 40 to 672 are derived from the excavation of the Anglo-Saxon cemetery of Linton Heath, Cambridgeshire, made in 1853. *The Archæol. Journ.* 1854, xi. 95, 215. *Crania Britannica*, Pls. 10 and 46.

Presented by the Hon. R. C. NEVILLE, F.S.A.

10. 581. Anglo-Saxon. ♂, æt. e. 25. "Northumbrian Angle." Calv.

A 67, B 20, C 14·6, *a* 5, *b* 5·2, *c* 4·4, D 14·1, E 7·1, F 5·4 *p*, *a* 4·4, *b* 5·2, *c* 4·1, G 5·2, *a* 4·7, *b* 4·7, *c* 4, I 4·7, J 7·6, K 7·3.

Found in the cutting of the Malton and Driffield Railway, with an Anglo-Saxon iron sword, 2 ft. 8 in. long, laid by the side of the skeleton.

11. 54. Anglo-Saxon. ♂, æt. e. 60. "South Saxon." E.B.P.

A 83, B 21·9, C 15·7, *a* 5·4, *b* 5, *c* 5·3, D 15·7, E 7·7, F 6 *p*, *a* 5, *b* 5·8, *c* 4·6, G 5·6, *a* 5, *b* 5·1, *c* 4·5, H 4·7, I 5·3, J 7·8, K 7·2.

This very capacious platycephalic skull was discovered in a tumulus at Kemp Town, Brighton, in 1837. The head of the skeleton was laid on a large discoidal piece of conglomerate; and beside it were found a sword and spear-head, boars' tusks, bone pins made of the metatarsals of a small horse, &c.

12. 74. Anglo-Saxon. ♂, "Jute." Imperf. calv.

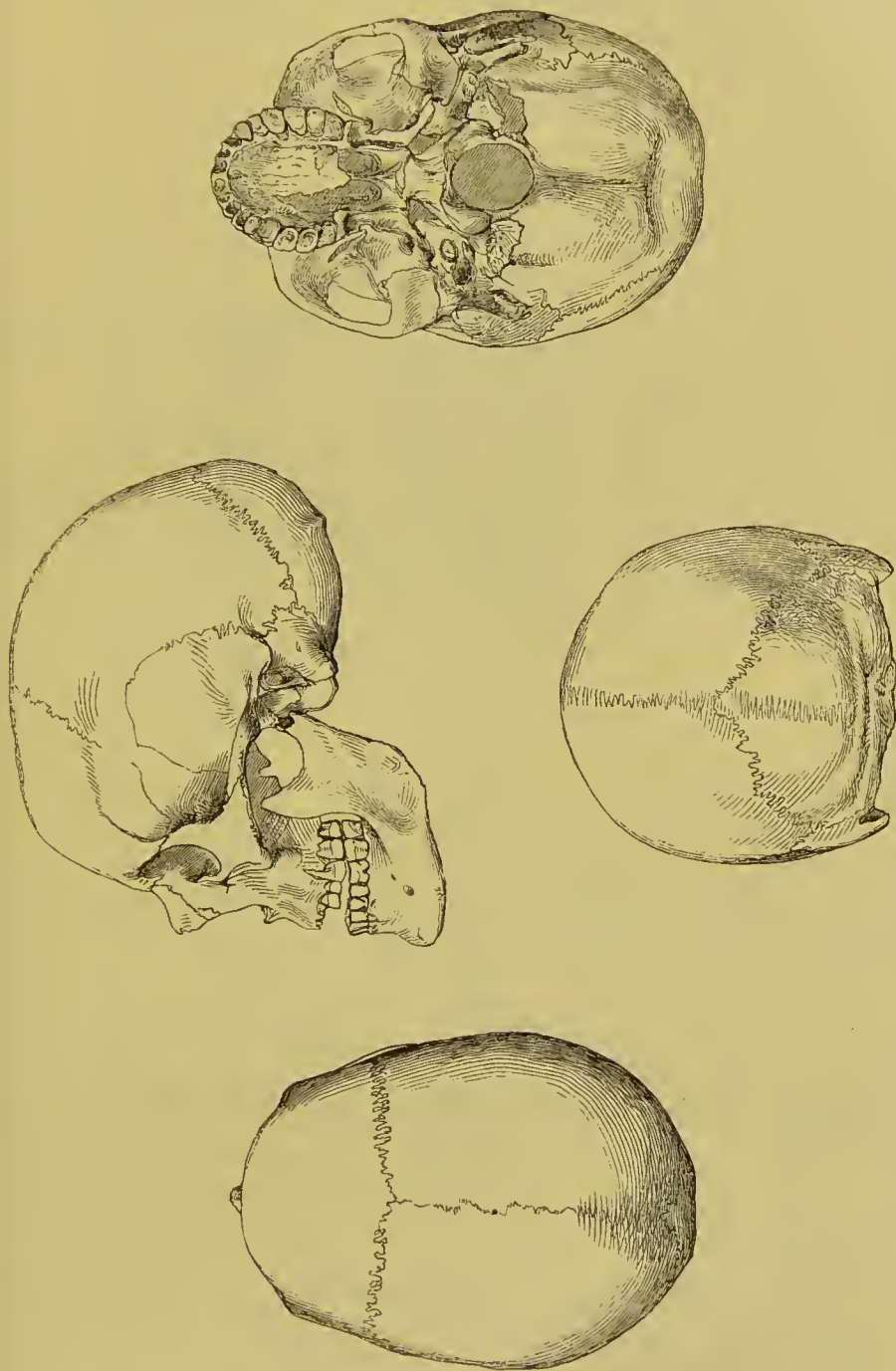
B 20·7, C 15·3, *a* 5·5, *b* 5·2, *c* 4·6, D 14·3, E 7·2, F 5·4 *p*, *a* 4·5, *b* 5·1, *c* 4·5, G 4·6, *b* 4·8, *c* 3·9, J 7·4.

13. 1052. Anglo-Saxon. ♂, æt. e. 70. "Jute." Imperf. cran.

B 21, C 15·5, *a* 5·1, *b* 5·2, D 14·7, E 7·6, F 5·9 *t*, *a* 4·7, *b* 5·2, H 4·6, I 5·5, J 7·7.

C. R. SMITH's *Collect. Antiq.* vol. iii. p. 1. *Crania Britannica*, pl. 38. By a singular oversight the absence of the spheno-parietal sutures in this skull was not mentioned.

Presented by Mr. JOS. MAYER, F.S.A.



Figs. 42-45.—Cranium of an East Angle, from Linton Heath Cemetery.—No. 672.—Quarter-size.

Nos. 74 and 1052 from the Anglo-Saxon Cemetery at Ozingell, Kent, explored in 1845.

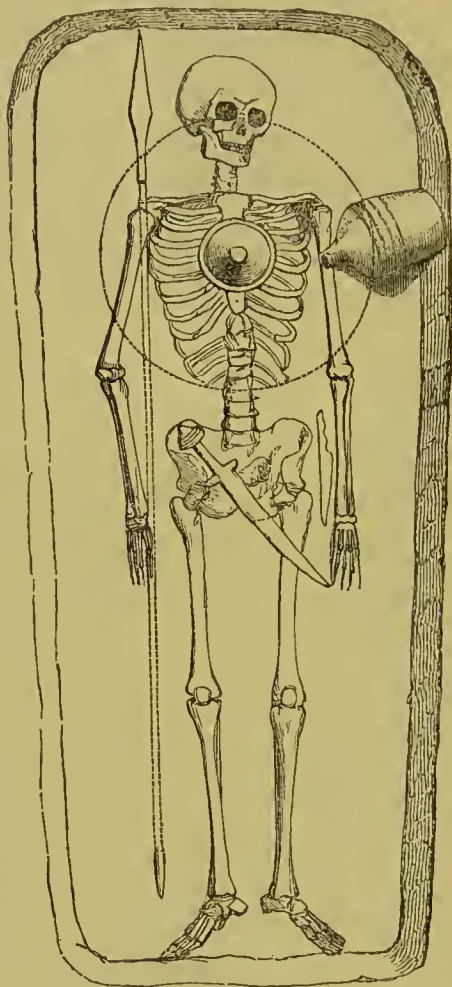


Fig. 46.—Ozingell Grave, with Skeleton and remains of Shield and Spear in situ.

14. 1310. Anglo-Saxon. "Jute." ♂, aged. Isle of Thanet. Imperf. calv.

15. 673. Anglo-Saxon. ♂, very aged. "Frank." Imperf. calv. The sutures are almost entirely obliterated. It does not admit of measurements.

Found to the west of Temple Farm, Strood in Kent, with an "Angon," &c. See *Collect. Antiq.* vol. v. p. 129.

16. 124. Anglo-Saxon. ♂, æt. e. 60. "West Saxon." (Mr. Akerman's No. 2.) Imperf. cran.

A 7·4, B 20·9, C 14·6, *a* 5·3, *b* 4·8, *c* 4·5, D 14·5, E 7·2, F 5·9 *p*,
a 5·3, *b* 5·6, *c* 4·4, G 5·1, *a* 4·7, *b* 4·6, *c* 3·9, H 4·4, J ·82, K ·70.

An unusually short and broad skull, with square forehead.
 Frontal suture persistent.

17. 125. Anglo-Saxon. ♀, æt. e. 50. "West Saxon." (No. 23.) Imperf. calv.

B 20·1, C 14·9, *a* 5·1, *b* 5, *c* 4·8, D 14·2, E 7·2, F 5·2 *p*, *a* 4·5, *b* 5·1,
c 4·1, G 5·4, *a* 4·8, *b* 4·8, *c* 4, J ·72, K ·75.

18. 126. Anglo-Saxon. ♀, æt. c. 20. "West Saxon." (No. 34.) Imperf. calv.

B 20·8, C 14·8, *a* 5·2, *b* 4·8, *c* 4·8, D 14·7, E 7·4, F 5·7 *p*, *a* 4·5,
b 5·3, *c* 4·4, G 5·2, *a* 4·7, *b* 5, *c* 4·3, J ·76, K ·70.

19. 127. Anglo-Saxon. ♀, æt. c. 70. "West Saxon." Imperf. calv.

A 7·5, B 20·8, C 14·8, *a* 5, *b* 5, *c* 4·8, D 14·1, E 7·5, F 5·4 *p*, *a* 4·6,
b 5·1, *c* 4, G 5·4, *a* 4·6, *b* 4·7, *c* 5, J ·72, K ·72.

Nos. 126 and 127 present the feminine prominence of the supraoccipital region, the latter in an unusual degree, which renders it more dolichocephalic.

20. 260. Anglo-Saxon. ♀, age doubtful, perhaps 35 to 40. "West Saxon." Imperf. cran.

Presents one form of J. F. MECKEL's *Condylus tertius*, the *Processus papillares* of HALBERTSMA.

"No. 54. Skeleton of an adult about 5 feet 7 inches long. The skull of very peculiar form. Fragments of bronze on the left of the pelvis, and on the right a glass bead. Beads of glass and a bronze ring at the waist. A very broad iron buckle at the waist. A bronze flat circular fibula on each collar-bone."—*Archæol.* xxxv. 264.

This skull is very anomalous, being considerably (not unequally but consentaneously) deformed by some influence operating during life and in infancy. The manner and degree of distortion will be seen by the subjoined figure. This unique cranium has given rise to much interest and many remarks. The view now expressed is the same as that I took of it in the *Crania Britannica*, where I stated my belief that the deformation could not be *posthumous*. The regular, symmetrical and consentaneous moulding of all the bones of such a spheroidal body to a resulting form quite different from the normal, without dislocation, and so as still to retain a perfect harmony of adaptation among themselves, could only be produced by slowly operating causes, during life, and at that period at which the bones are pliant. Posthumous distortion of the skull often results in dislocation, and in that unequal deformation of individual bones which to-

tally prevents their re-adaptation. Here such appearances are quite absent.

There is one mark in this skull which, I believe, is conclusive against the notion of posthumous distortion. The position

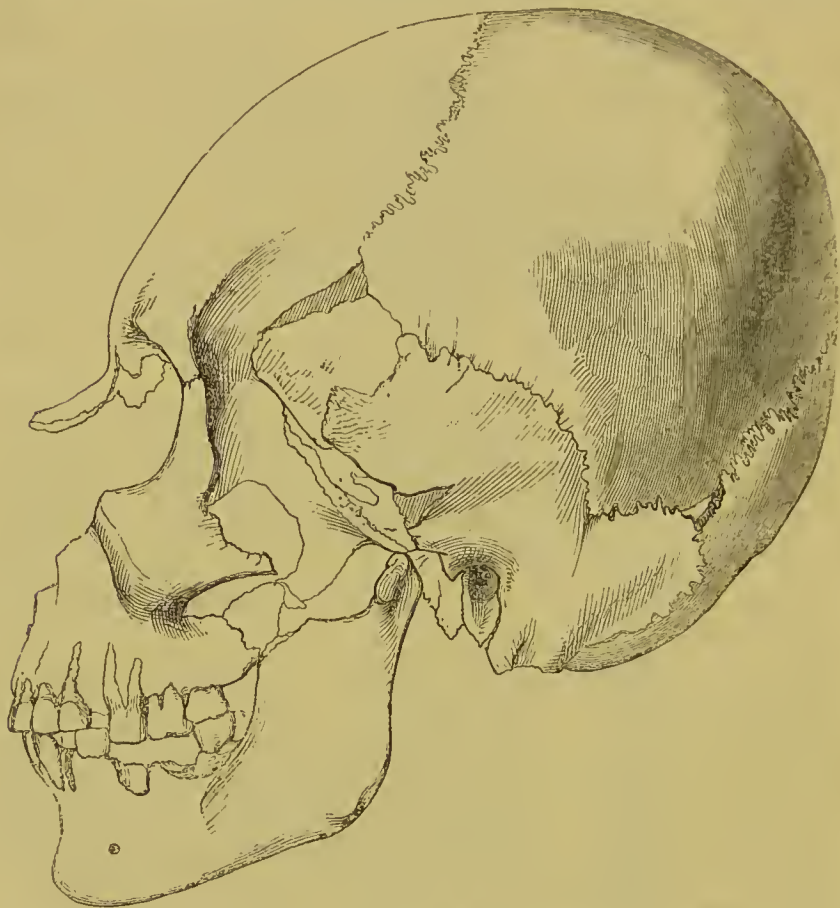
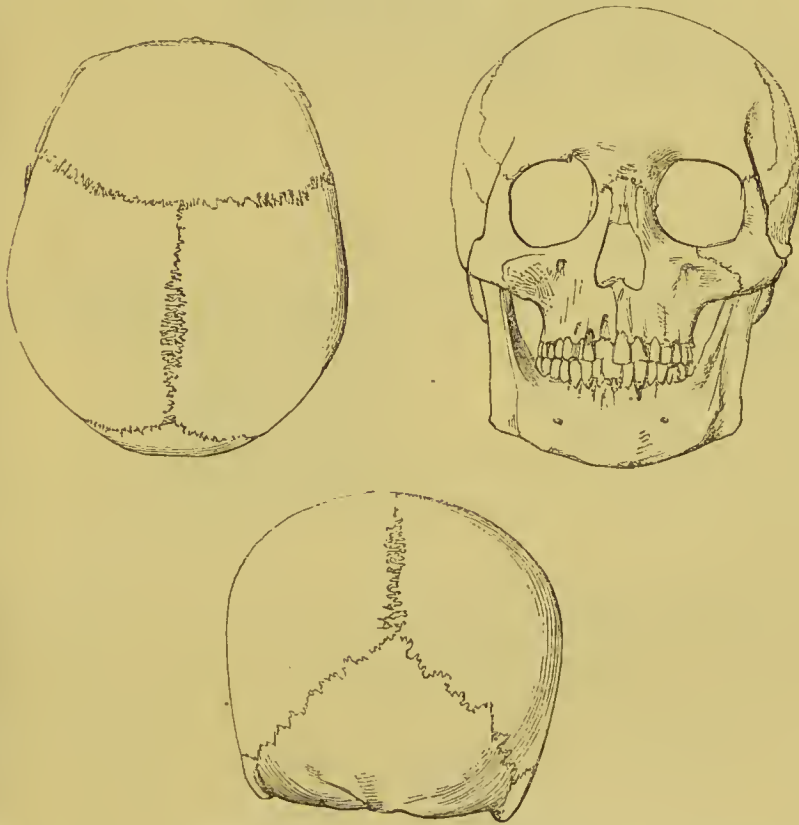


Fig. 47.—*Distorted Skull of a West Saxon Woman, Harnham.—Half-size.*

of the alisphenoid seems to be altered, pushed upwards and backwards, and its shape seems to be somewhat narrowed and elongated; which changes have been effected simultaneously with the modification in the positions and forms of the adjacent frontal, parietal, and temporal bones. In the natural state the speno-frontal suture at the top of the alisphenoid most generally rises very gently from the level of the suture joining the malar bone to the external orbital process, till it reaches the level of the top of the squamous bone. It is not pretended that this is an absolute law of form among these small bones and sutures; but it is the arrangement generally met with. In crania deformed by pressure on the frontal bone, the speno-frontal suture ascends more abruptly, and the tip of the alisphenoid

rises above the level of the squamous suture. This is well seen in MORTON's pl. 20 (*Crania Americana*), the profile of the Natchez skull. In the Harnham skull and our figure the spheno-frontal suture will be seen to be on a decidedly higher level than the suture joining the malar bone to the external orbital process, and the alisphenoid ascends as decidedly above the level of the top of the squamous bone. The slight transverse depressions across the frontal and the fore part of the parietal bones are clear indications of the interference of art.

The rule laid down by Dr. L. A. Gosse as a test of deformation is to the following effect. In an undeformed calvarium, if we place it upon a plane supported by the incisor teeth and mastoids, and let fall a perpendicular line from the anterior end of the sagittal suture at its junction with the coronal, this line will cut the external auditory orifice, generally towards its an-



Figs. 48-50.—Cranium of a West Saxon, from the Harnham Cemetery.—Quarter-size.

terior edge. If the line falls notably before or behind this orifice, the calvarium has undergone *deformation*¹. In this Anglo-Saxon skull the line falls at least an inch *behind* the external auditory foramen.

¹ *Essai sur les Déformations Artif. du Crâne*: 1855, p. 7.

The late learned Professor RUDOLPH WAGNER, of Göttingen, alludes to this skull (*Götting. gelehrte Anzeigen*, 14. Stück, den 3 April, 1861, S. 528), and, with his usual soundness of judgment, recommends caution in the adoption of the view which I have felt compelled to take of it¹.

Nos. 124 to 260 derived from the Anglo-Saxon Cemetery at West Harnham, Wilts, excavated in 1853. *Archæologia*, vol. xxxv. pp. 259, 475. *Crania Britannica*, Pl. 9.

Presented by Mr. J. Y. AKERMAN, F.S.A.

21. 587. Anglo-Saxon. ♀, æt. c. 30. "West Saxon." (Mr. Akerman's grave, No. 71.)

B 20, C 14·5, *a* 5, *b* 5, *c* 4·5, D 13·7, E 7·1, F 5·3 *p*, *a* 4·5, *b* 5, *c* 4·2, G 5·4, *a* 4·5, *b* 4·7, *c* 4·3, H 4·2, I 5, J 7·4, K 7·6.

The small, dolichocephalic, but well formed skull of a young woman, exhibiting the feminine supra-occipital fullness.

Crania Britannica, Pl. 47 and Description.

22. 588. Anglo-Saxon. ♀, æt. e. 60. "West Saxon." Imperf. eran.

C 14·6, *a* 5·1, *b* 4·9, *c* 4·6, D 14·4, E 7·6, F 5·8, *c* 4·5, G 5·4, *a* 4·5, *b* 4·6, *c* 4·1, H 5, I 5·6, K 7·1.

A large woman's modern English-looking skull, with narrow forehead.

23. 589. Anglo-Saxon. ♂, æt. e. 70. "West Saxon." (No. 61.) Imperf. eran.

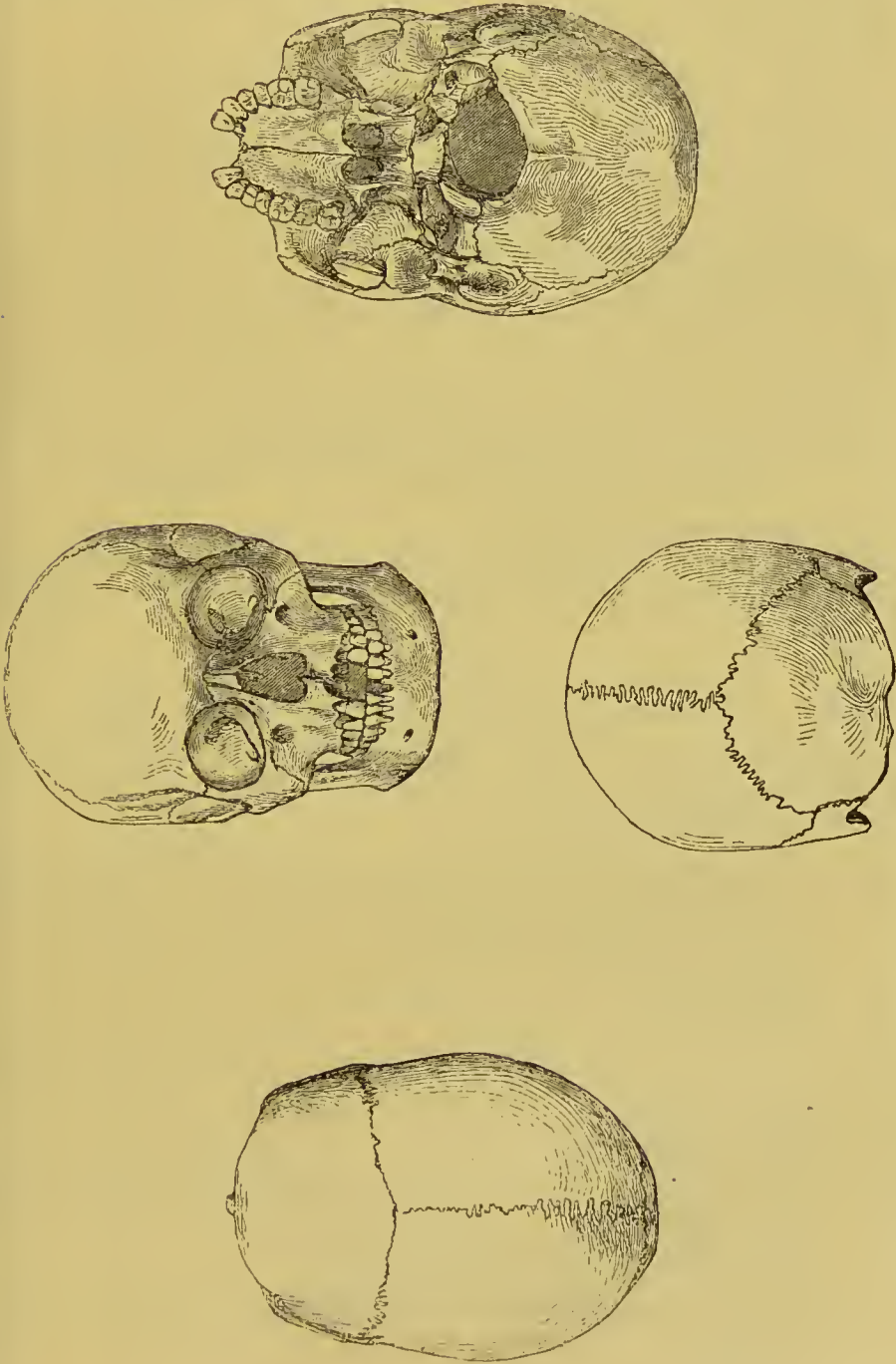
B 20·5, C 14·3, *a* 4·9, *b* 4·8, *c* 4·6, D 14·5, E 7·3, F 5·8 *p*, *a* 4·8, *b* 5·6, *c* 4·6, G 5·2, *a* 4·6, *b* 4·5, *c* 4·1, H 5·1, J 7·9, K 7·1.

¹ A recent discovery made in a Frankish cemetery, in the neighbourhood of Niederolm, tends materially to confirm the views I took on the first examination of this extraordinary skull, and which are expressed in the '*Cran. Brit.*' p. 40. The Niederolm skeleton, which is also the relic of a woman, but young, was accompanied with objects of flint, bronze, and iron, and had a bronze ring upon one of the finger-bones, a cross being engraved on its bezel. The deformation is exactly of the same kind as that of this Anglo-Saxon skull, but has been carried to a greater degree. Alexander ECKER. *Skelet eines Makrokephalus in einem fränkischen Todtenfelde*, Archiv für Anthropologie: Braunschweig, 1866, i. 75, where woodcuts of the skull and ring are given. It is therefore clear that the distortion is artificial, and not posthumous as was affirmed by Dr. THURNAM, my coadjutor in the *Cran. Brit.* Deser. Pl. 9. p. (4); and it is likewise rendered more than probable that the Teutonic tribes at times adopted that very mode of deformation of the heads of their infants which was practised by many American nations. Further, the opinion maintained in the work above quoted, p. 41-42, that the greatly distorted crania found in Austria and Switzerland, and regarded by RETZIUS and FITZINGER as those of Avars, are really the relics of people of the soil, may now be considered to have received the confirmation I anticipated.

The two middle incisors of the lower jaw have been lost in very early life, if not congenitally absent.

24. 590. Anglo-Saxon. ♀, æt. c. 16. "West Saxon." Imperf. cran.

F a 4·4, b 5·9.



Figs. 51-54.—Cranium of West Saxon Woman, Long Wittenham.—No. 587.—Quarter-size.

Remarkable for its interparietal breadth and narrowness of forehead.

590 *a*, right femur of 589, 19 inches long; *b*, right tibia, 15·5 inches long; *c*, left femur; *d*, left tibia of the same skeleton.

Nos. 587 to 590 from the Anglo-Saxon Cemetery at Long Wittenham, Berks, excavated in 1859. *Archæologia*, vol. xxxviii. p. 327.

Presented by Mr. J. Y. AKERMAN, F.S.A.

25. 674. Anglo-Saxon. ♂, æt. c. 70. "Jute."

A 75, B 20·8, C 14·5, *a* 4·9, *b* 5·1, *c* 4·5, D 14·9, E 7·4, F 5·5 *t*,
a 4·6, *b* 5, *c* 4·5, G 5·5, *a* 4·7, *b* 5, *c* 4·3, H 5·4, I 5·6, J 7·4,
K 7·4.

From a grave discovered near Temple Farm, Strood, Kent.
Collect. Antiq. v. 136.

Presented by Mr. C. ROACH SMITH, F.S.A.

26. 925. Anglo-Saxon. ♀, young. "South Saxon." Im-
perf. calv. D.C.

A 70, B 20·2, C 14·3, *a* 4·7, *b* 5, *c* 4·6, D 13·9, E 7·2, F 5·4 *t*,
a 4·6, *b* 4·9, *c* 4, G 5·5, *a* 4·5, *b* 4·7, *c* 4·1, J 7·5, K 7·6.

Has the frontal suture.

Derived from a tumulus near Lewes, Sussex. It is probable that a small green glass vase of Anglo-Saxon origin was found with it.

Averages of Measurements of Anglo-Saxon Skulls.

Males, 5 calvaria, A 74·8, B 21, C 14·9, *a* 5·1, *b* 5·1, *c* 4·6,
D 14·8, E 7·4, F 5·7, *a* 4·8, *b* 5·3, *c* 4·4, G 5·3, *a* 4·7, *b* 4·8,
c 4·2, J 7·7, K 7·2.

11 miscellaneous, A 74·8, B 21, C 15, *a* 5·1, *b* 5·1, *c* 4·7,
D 14·7, E 7·4, F 5·7, *a* 4·7, *b* 5·3, *c* 4·3, G 5·3, *a* 4·7, *b* 4·8,
c 4·1, H 4·7, I 5·3, J 7·7, K 7·2.

Extremes, A 67–83, J 71–83, K 70–74; 2 out of 9 are brachycephalic.

Females, 9 calvaria, more perfect, A 67·2, B 20·2, C 14·5, *a* 4·9,
b 4·9, *c* 4·7, D 14, E 7·1, F 5·3, *a* 4·6, *b* 5, *c* 4·2, G 5·2, *a* 4·5,
b 4·6, *c* 4·2, J 7·4, K 7·3.

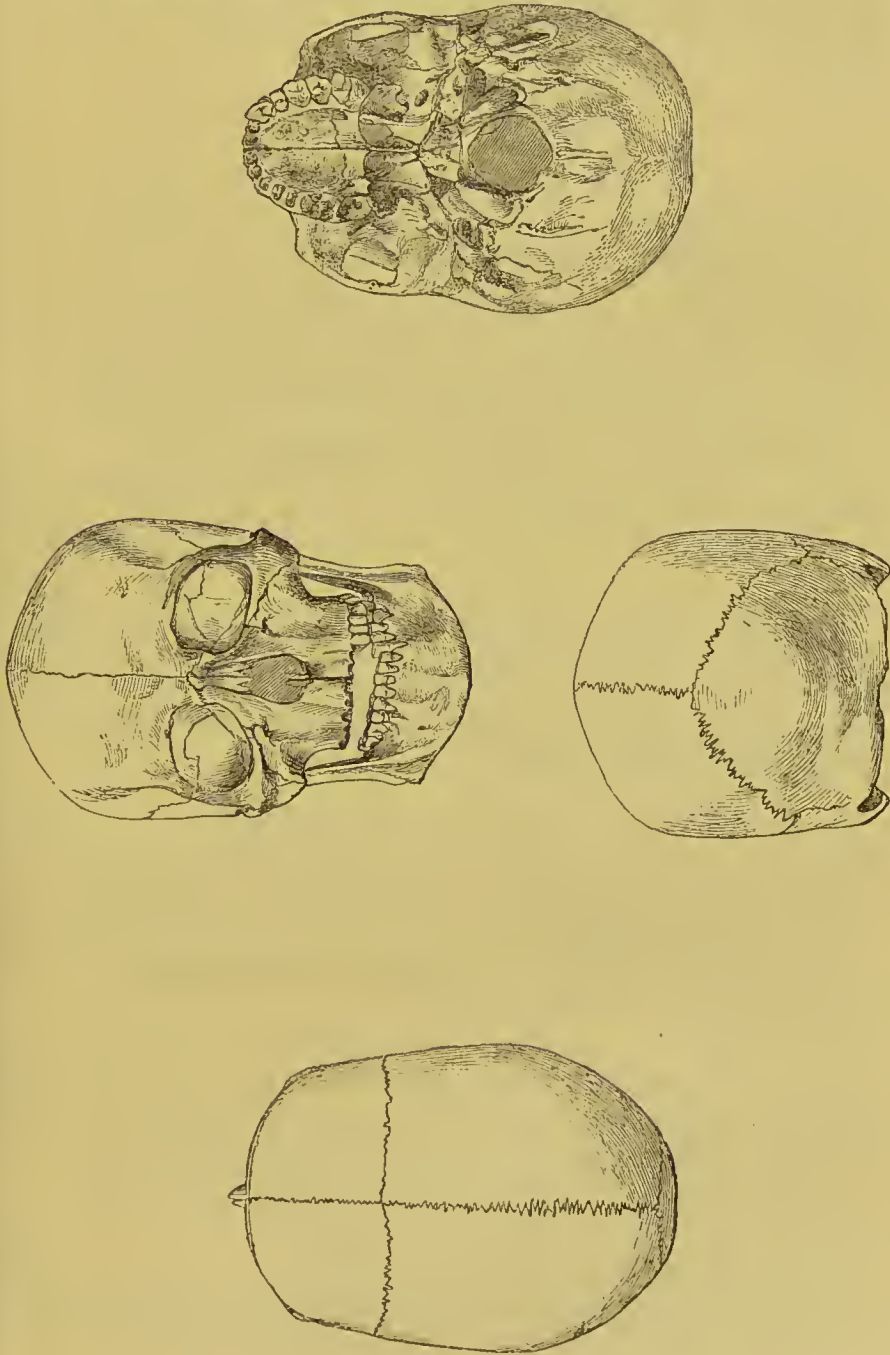
11 miscellaneous, A 67·2, B 20·1, C 14·4, *a* 4·9, *b* 4·9, *c* 4·6,
D 14, E 7·1, F 5·3, *a* 4·6, *b* 5·1, *c* 4·2, G 5·2, *a* 4·6, *b* 4·7,
c 4·2, H 4·3, I 4·9, J 7·5, K 7·3.

Extremes, A 63–75, J 72–81, K 70–76; 1 out of 11 brachycephalic.

22 ♂ and ♀, A 71, B 20·5, C 14·6, *a* 5, *b* 5, *c* 4·6, D 14·3, E 7·2, F 5·5, *a* 4·6, *b* 5·1, *c* 4·2, G 5·2, *a* 4·6, *b* 4·7, *c* 4·1, H 4·5, I 5·1, J ·76, K ·72.

4. *Scandinavian.*

107*. Ancient Norse. ♂, æt. c. 45. Calv.



Figs. 55-58.—Cranium of an Ancient Scandinavian, Lough Larne.—No. 107*.—Quarter-size.

B 20·8, C 14·5, *a* 4·8, *b* 5·2, *c* 4·5, D 14·3, E 7·4, F 5·4 *p*, *a* 4·8, *b* 5·1, *c* 4·5, G 5·4, I 5·1, J ·73, K ·73.

Found in 1840, in a grave on the sea-shore near Lough Larne, co. Antrim, together with a Danish sword and other antiquities.

WORSAAE'S *Danes and Norwegians*, p. 311. GRATTAN'S *Accurate Mode of Measuring Human Crania*, Ulster Journ. of Archæol. 1853. In this latter memoir there are three outlines of the skull and a table of elaborate measurements. *Cran. Brit.* Pl. 56.

b. MODERN BRITISH RACES.

1. *English.*

1. 17. English. ♀, æt. e. 17. Imperf. calv.

2. 19. English. ♂, æt. e. 80. *Derbyshire.*

A 89, B 21·5, C 15·7, *a* 5·3, *b* 5·4, *c* 5, D 15·9, E 7·5, F 6·1 *p*, *a* 4·9, *b* 5·4, *c* 4·6, G 5·6, *a* 4·8, *b* 5, *c* 4·3, I 5·3, J ·81, K ·74.

3. 20. English. ♂, æt. e. 60. *Derbyshire.* Calv.

A 87, B 21·5, C 15·2, *a* 5, *b* 5·5, *c* 4·7, D 14·8, E 7·5, F 5·9 *p*, *a* 4·9, *b* 5, *c* 4·7, G 5·2, *a* 4·6, *b* 4·8, *c* 4·2, I 5·4, J ·78, K ·69.

4. 56. English. ♂, æt. e. 45.

E.B.P.

A 77, B 20·6, C 14·8, *a* 5, *b* 4·9, *c* 4·9, D 15, E 7·2, F 6·1 *t*, *a* 5·3, *b* 5·2, *c* 4·5, G 6, *a* 4·7, *b* 4·8, *c* 4, H 5·3, I 5·7, J ·84, K ·83.

This fine brachycephalic skull is that of a monk of Southover Priory, near Lewes, Sussex.

5. 57. English. ♀, æt. e. 50. Imperf. eran.

E.B.P.

A 68, B 20·3, C 14·3, *a* 4·8, *b* 5·2, *c* 4, D 13·3, E 7·3, F 5·3 *t*, *a* 4·7, *b* 4·7, *c* 4, G 5·2, *a* 4·5, *b* 4·6, *c* 4, H 4·5, I 5·3, J ·72, K ·71.

Has a frontal suture.

Found in excavations at Richborough Castle, Kent, by Mr. W. H. ROLFE.

6. 60. English. ♀, æt. e. 30. Calv.

E.B.P.

A 62, B 19·4, C 13·7, *a* 4·5, *b* 4·5, *c* 3·7, D 13·5, E 6·9, F 5·2 *p*, *a* 4·4, *b* 4·6, *c* 4·2, G 5, *a* 4·2, *b* 4·4, *c* 4, I 5, J ·75, K ·72.

Found in cutting a sewer in Cateaton Street, London.

7. 61. English. ♂, æt. e. 70. Calv.

E.B.P.

A 81, B 21·4, C 15·1, *a* 5·5, *b* 4·7, *c* 4·9, D 15, E 7·5, F 5·8 *p*, *a* 5, *b* 5·1, *c* 4·4, G 5·5, *a* 4·6, *b* 4·8, *c* 4·2, I 5·5, J ·77, K ·73.

8. 62. English. ♀, æt. e. 45. Calv. E.B.P.

A 60, B 19·2, C 13·4, *a* 4·5, *b* 4·7, *c* 4·2, D 13, E 6·9, F 5 *p*, *a* 4·2, *b* 4·9, *c* 4, G 5·1, *a* 4, *b* 4·4, *c* 3·9, I 4·5, J 7·2, K 7·3.

A small, long, low calvarium.

9. 63. English. ♂, of considerable age. Imperf. calv. E.B.P.

B 20·4, C 14·5, *a* 4·8, *b* 5, *c* 4·9, D 14·3, E 6·9, F 5·9 *t*, *a* 4·6, *b* 4·9, *c* 4·3, G 5·6, *a* 4·6, *b* 5, *c* 3·9, J 8·5, K 8·1.

This remarkably short acrocephalic calvarium was derived from the Cemetery of Reading Abbey, Berks.

10. 64. English. ♂, of considerable age. Imperf. calv. E.B.P.

A 78, B 21·7, C 15·3, *a* 5·2, *b* 5·3, *c* 4·8, D 15·1, E 7·8, F 5·8 *p*, *a* 5·2, *b* 5·3, *c* 4·4, G 5·4, *a* 4·9, *b* 4·9, *c* 4·2, J 7·6, K 6·9.

11. 65. English. ♀, of middle age. Calv. E.B.P.

A 68, B 20·3, C 14·5, *a* 4·8, *b* 5·1, *c* 4·6, D 14·2, E 7·1, F 5·3 *p*, *a* 4·6, *b* 5·2, *c* 4·6, G 5·3, *a* 4·4, *b* 4·6, *c* 4·2, I 4·9, J 7·4, K 7·4.

Nos. 64 and 65 found at a considerable depth in Newcastle Street, Strand, London, 1844.

12. 66. English.

E.B.P.

B 20·6, C 14·4, *a* 4·6, *b* 5·3, *c* 4·5, F 5·5 *p*.

From north-east side of St. Paul's Church Yard, London.

13. 67. English. ♀, æt. e. 40.

E.B.P.

A 72, B 20·5, C 15, *a* 5·5, *b* 4·7, *c* 4·8, D 14·7, E 7·2, F 5·7 *p*, *a* 4·9, *b* 5·5, *c* 4·4, G 5·4, *a* 4·8, *b* 4·8, *c* 3·9, H 4·6, I 4·5, J 7·9, K 7·5.

The surface of the calvaria has been polished.

14. 68. English. ♀, æt. e. 45. Imperf. calv.

E.B.P.

A 69, B 20·3, C 14·5, *a* 4·8, *b* 5, *c* 4·9, D 14·2, E 7·1, F 5·5 *p*, *a* 4·7, *b* 5, *c* 4, G 5·1, *a* 4·5, *b* 4·6, *c* 4·1, J 7·7, K 7·2.

15. 69. English. ♂, æt. e. 60. Calv.

E.B.P.

A 79, B 22·4, C 16·8, *a* 5·4, *b* 6·4, *c* 4·8, D 14·7, E 8, F 5·5 *t*, *a* 5, *b* 4·2, *c* 4·5, G 5·7, *a* 5·4, *b* 5·1, *c* 4·2, I 5·4, J 6·8, K 7·1.

There is no trace whatever of the sagittal suture; its course is occupied by a *carina*. The uniparietal exhibits a *beak* projecting into the coronal suture. The lambdoidal suture is also obliterated in all its middle portions. The remaining sutures are open. This is a good example of true *scaphocephalism*, from premature ossification of sutures. The calvaria is elevated in the coronal region, very long and tall, terminating behind in a

globose occiput, and has a broad, square, upright, and high frontal region.

Synostotic distortions are well known to be abnormal, and afford no support whatever to the hypothesis of Dr. H. MINERIN, that scaphocephalism, or macrocephalism, might be the heritage of the ancient tribe, mentioned by HIPPOCRATES, who dwelt on the shores of the Black Sea. *Contributions to Craniology*, Dublin Quart. Journ. Med. Sci., Nov. 1856.—K. E. VON BAER, *Die Makrocephalen im Boden der Krim und Oesterreichs, verglichen mit der Bildungs-Abweichung welche Blumenbach Macrocephalus genannt hat*. St. Petersburg, 1860, 4to, Taf. i., ii., iii.—J. BARNARD DAVIS, *On Synostotic Crania among Aboriginal Races of Man*. Haarlem, 1865, 4to, 11 Plates.

16. 70. English. ♂, of considerable age. Imperf. calv. E.B.P.

B 20·7, C 15·4, *a* 5, *b* 5·2, *c* 5·2, D 14·7, E 7·5, F 5·5 *t*, *a* 4·7, *c* 4·3, G 5·3, *a* 4·9, *b* 4·9, *c* 4, I 5·3, J 7·3, K 70.

17. 71. English. ♀, of considerable age. Imperf. calv. E.B.P.

B 19·3, C 13·7, *a* 4·7, *b* 4·8, *c* 4·2, D 13·8, E 6·7, F 5·3 *p*, *a* 4·2, *b* 4·8, *c* 4·3, G 5·2, *a* 4·4, *b* 4·5, *c* 3·8, J 7·9, K 77.

Nos. 69 to 71 found in Cloth Fair, London, 1843.

18. 78. English. ♀, æt. e. 14. Imperf. calv. E.B.P.

19. 96. English. ♂, æt. e. 70. Imperf. calv.

B 22, C 14·6, *a* 5·2, *b* 4·8, *c* 4·6, D 14·8, E 7·7, F 6 *t*, *a* 5·2, *b* 5·8, *c* 4·5, G 4·6, *a* 4·7, *b* 4·8, *c* 4·6, J 7·8, K 59.

A remarkable diseoidal calvarium, distorted by *plastic* deformation, which, *in appearance*, has carried up that portion of the occipital that rested on the spinal column, but *really* caused the parietals and upper portion of the occipital to descend and bulge out. The bones are thickened, and the distortion seems to have been the result of *osteoporosis*. Presents a nodular projection of the upper part of the occipital above the superior transverse ridge. The receipt of this calvarium, in 1853, first drew my attention to *plastic deformation*. See Plate I. and Plate II. fig. 1.

Found in a *Stone Coffin*, in 1853, at Llanthony Priory, Gloucestershire¹.

Presented by Mr. G. F. Fox, Gloucester.

¹ *Sur les Déformations Plastiques du Crâne*, par Dr. J. BARNARD DAVIS, *Mém de la Soc. d'Anthropologie*, 1860-63, i. 379.—*De Schedel met ingedrukte Basis*, door J. N. BOGTSTRA. Leiden, 1864, 8vo, 2 Platen.—J. A. BOOGAARD, *De Indrukking der Grondslakte van den Schedel door de Wervelkolom*, 1865, Plaat i.-iv.—*Dutch Anthropology*, *Anthropol. Review*, 1865, iii. 202.

20. 173. English. ♂, æt. c. 50.

A 75, B 20·7, C 14·2, a 4·7, b 5, c 4·5, D 14·4, E 7, F 6 t, a 4·9,
b 5·3, c 4·6, G 5·2, a 4·4, b 4·6, c 4·3, H 4·8, I 5·2, J ·85,
K ·74.

This very broad brachycephalic skull, with frontal suture, of a monk was found in June 1854, in excavations made at Abbey Hulton, Staffs. He had been interred in leathern boots, portions of which remained. FOSBROKE's *Brit. Monachism*, 3rd edit. 1843, p. 213.

21. 190. English? ♂, æt. c. 50. Calv.

A calvarium of unknown origin, bought with Nos. 184–189, Portuguese. The great wing of the sphenoid does not reach the parietal on either side. This calvarium has much of the Jewish form.

22. 192. English? ♂. Base of calv.

From the collection of Dr. ROBT. KNOX, Edinburgh.

23. 194*. English. ♂. Cast of skull of "JULIAN HIBBERT," a translator of some of the classic poets.

B 20·2, D 15·2, E 7·1, F 5·5 t, b 5·3, H 4·6, I 4·9, J ·77.

From Mr. C. ROACH SMITH.

24. 196. English. ♀, æt. c. 50. Imperf. calv.

B 20·5, C 14·5, a 5·1, b 5·2, c 4·2, D 14·5, E 7·2, F 5·7 p, b 5·3,
c 4·4, G 5, a 4·6, b 4·6, c 3·9, J ·79, K ·69.

Found in an excavation made under the altar-stone of the Old Church, Stoke-upon-Trent, Staffs.

25. 240. English. ♀, of considerable age. Imperf. calv.

B 20·7, C 14·4, a 4·7, b 4·7, c 5, D 14·2, E 6·9, F 5·5, a 4·8, b 5·1,
c 4·5, G 5·4, a 4·6, b 4·7, c 4, J ·79, K ·78.

A short broad calvarium.

26. 241. English. ♂, of considerable age. Imperf. calv.

B 22·8, C 16·2, a 5·6, b 5·2, c 5·4, D 15·7, E 7·9, F 6·2 t, a 5·3,
b 5·5, c 4·5, G 5·4, a 5·2, b 5·1, c 4·2, J ·78, K ·68.

An enormous platycephalic calvarium.

27. 242. English. ♀, of considerable age. Imperf. calv.

B 19·8, C 14·5, a 4·8, b 4·9, c 4·8, D 13·8, E 7·2, F 5·3 t, a 4·3,
b 4·8, c 4·2, G 5·4, a 4·6, b 4·7, c 4, J ·73, K ·75.

Nos. 240 to 242 from Cemetery at St. Albans Abbey.
Presented by Mr. JNO. EVANS, F.S.A.

28. 243. English. ♀, of extreme age. Imperf. calv.

A 71, B 20·3, C 14·2, *a* 4·6, *b* 4·4, *c* 5, D 13·8, E 7·1, F 5·4*t*, *a* 4·8, *b* 4·9, *c* 4·3, G 5·1, *a* 4·3, *b* 4·4, *c* 4·2, J ·76, K ·72.

Presents that depression of the centre of the parietal, on the left side only, which is the result of very advanced age, and follows senile atrophy of the brain. *Cran. Brit.* p. 6, note *.

29. 244. English. ♂, of advanced age. Imperf. calv.

A 69, B 20·4, C 14·7, *a* 5, *b* 5·1, *c* 4·6, D 14·4, E 7·3, F 5·5*t*, *a* 4·4, *b* 5·1, *c* 4·4, G 5·5, *a* 4·5, *b* 4·8, *c* 4·2, J ·75, K ·75.

30. 245. English. ♂, of considerable age. Imperf. calv.

B 20·4, C 15·1, *a* 5·2, *b* 5·2, *c* 4·7, D 14·4, E 7·3, F 5·2*p*, *a* 4·5, *b* 4·6, *c* 3·8, G 4·8, *a* 4·7, *b* 4·7, *c* 3·9, J ·71, K ·65.

31. 246. English. ♂, of advanced age. Imperf. calv.

B 20·7, C 14·3, *a* 4·6, *b* 5, *c* 4·7, E 7·3, F 5·5*t*, *a* 4·6, *b* 5, *c* 4·5, G 5, J ·75, K ·68.

Nos. 243 to 246 found with others buried in undisturbed ground in a field, Whitwell, Rutlandsh.

From Rev. C. ELLICOTT.

32. 387. English? ♂, æt. probably between 40 and 50.

A 59, B 19·6, C 14·3, *a* 4·9, D 12·8, E 7·4, F 4·8*t*, *a* 4·2, *b* 3·9, *c* 3·8, G 4·8, *a* 4·4, *b* 4·2, *c* 4·1, H 4·3, I 4·4, J ·65, K ·65.

This long, cylindrical, but diminutive skull is that of a convict, who was executed at Norfolk Island. His age is doubtful. The sutures are almost wholly effaced, the sagittal and lambdoid not being traceable. Such synostosis forms the basis of all the peculiarities of the cranium, and most likely also of those of the individual to whom it appertained. This is an example of microcephalism, and from its peculiar synostotic deformation is well deserving the designation of *cylindrocephalic*.

As the convicts selected for banishment to Norfolk Island were the most reprobate and inveterate offenders, we have grounds for concluding that his execution on this spot was the consequence of crimes of unwonted enormity. That his moral state was strongly controlled by his cephalic peculiarities there cannot be a doubt. An early closure of the sutures has occasioned a stunted growth of the brain, especially of its convolutions, and thus prevented the development of those structures and faculties which might have given a different direction to his lower propensities. Notwithstanding the captivating dreams of idealists and philanthropists, he may be regarded as having been weak and criminal by nature. And if society should ever recognize the essential and ineffaceable differences inherent in

individual men, as well as in special races, and submit to be guided by the teachings of anthropological science, such miserable persons will be permanently separated and treated, not as criminals, but as dangerous idiots.

This skull is alluded to in a memoir by the author *On Synostotic Crania among Aboriginal Races of Man*, Trans. of Dutch Soc. of Sciences Haarlem, 1865, p. 21.

Presented by Rear-Admiral H. M. DENHAM, of H.M.S. 'Herald,' and Mr. JNO. D. MACDONALD, Surg. R.N.

33. 681. English. *Yorkshire*. ♂, æt. c. 60.

A 92, B 22·3, C 15·8, *a* 5·2, *b* 5·1, *c* 5·5, D 15·2, E 7·9, F 5·8 *p*,
a 5, *b* 5·6, *c* 4·4, G 5·4, *a* 4·7, *b* 5, *c* 4·8, H 5·1, I 5·2, J 7·3,
K 6·8.

A dolichocephalic skull of large size, with a long narrow face; the lower jaw being of unusual depth and magnitude, with its angles and the chin much everted.

The first acquisition in the Collection; from the burial-ground of the Old Church, Halifax, 1822.

34. 779. English. ♂, æt. c. 20. Imperf. calv.

A 62, B 19·5, C 13·7, *a* 4·5, *b* 4·8, *c* 4·4, D 13·6, E 6·9, F 5·2 *t*,
a 4·6, *b* 4·7, *c* 4·1, G 5, *a* 4·4, *b* 4·6, *c* 3·9, J 7·5, K 7·2.

35. 780. English. ♀, æt. c. 20. Imperf. calv.

B 19·4, C 13·5, *a* 4·6, *b* 4·9, *c* 4, D 13·3, E 6·6, F 5·4 *p*, *a* 4·7, *b* 4·5,
c 4·1, G 5, *a* 4, *b* 4·4, *c* 3·6, J 8·2, K 7·5.

Has a frontal suture.

Nos. 779 and 780. Two small, but well formed, calvaria of young women, one dolicho- the other brachycephalic; found with many others at Daylesford, Worcestersh., 1861.

From Rev. JNO. W. LOCKWOOD.

36. 850. English. ♀, girl. Imperf. calv.

D.C.

Presented by Dr. SPURZHEIM.

37. 854. English? ♂, æt. 74. Calv.

D.C.

B 20·8, C 14·7, *a* 5, *b* 5, *c* 4·7, D 14·5, E 7·2, F 5·6 *t*, *a* 4·8, *b* 4·8,
c 4·6, G 5·4, *a* 4·7, *b* 4·7, *c* 4·2, J 7·7, K 7·5.

This calvarium is that of a murderer. It shows signs of caries on the os frontis.

38. 856. English. ♀, of considerable age. Imperf. calv.

D.C.

B 20·7, C 14·6, *a* 5, *b* 5·2, *c* 4·4, D 14, E 7·3, F 5·4 *t*, *a* 4·8, *b* 4·8,
c 4·2, G 5·4, *a* 4·9, *b* 4·9, *c* 4·3, J 7·4, K 7·4.

Has a frontal suture.

39. 857. English. ♂, of considerable age. Imperf. calv.
D.C.

A 75, B 21·4, C 15·7, *a* 5·3, *b* 5·5, *c* 4·9, D 15·6, E 7·5, F 5·9 *t*,
a 4·9, *b* 5·1, *c* 4·2, G 5·8, *a* 5, *b* 5·2, *c* 4·4, J 7·8, K 7·7.

Presents a prominence of the upper portion of the occipital, and an unusual depression on each side in the course of the lambdoidal suture, where it descends to the mastoid.

40. 899. English. "Old ROBERT CARRE." *Lincolnshire*. ♂, aged probably 85. D.C.

A 92·5, B 21·8, C 15·7, *a* 5·3, *b* 5·2, *c* 5·2, D 15·4, E 7·7, F 6·1 *t*,
a 5, *b* 5·7, *c* 4·8, G 5·7, *a* 4·7, *b* 4·9, *c* 4·3, H 4·8, I 5·3, J 7·9,
K 7·4.

This very fine skull is that of the founder of the Carr family of Sleaford, Lincolnshire. See *The Family of Carre of Sleford, Co. of Lincoln*. By MAURICE P. MOORE, F.S.A.: 1863.

41. 905. English. *Kent*. ♂, of considerable age. Imperf. calv. D.C.

A 85·5, B 21·8, C 15·5, *a* 5·1, *b* 5·4, *c* 5, D 16·2, E 7·2, F 6·3 *p*,
a 5·4, *b* 5·5, *c* 4·2, G 5·9, *a* 5, *b* 5·2, *c* 4·2, J 8·7, K 8·2.

This calvarium is of great magnitude and is very brachycephalic. It has a small interparietal, or rather triquetral bone at the point of the junction of the sagittal with the lambdoidal suture, and transverse fissures, or *pseudoraphæ*, running into the lambdoidal suture on each side, just above the superior transverse ridge of the occipital, the remains of a suture separating its scaly portion. The calvarium presents a large parieto-occipital flattening and great elevation across the middle of the parietal bones, as it were the result of pressure in infancy. In confirmation of this view, the calvarium is awry; the occipital region being most flattened on the left side, with corresponding flatness on the reverse, or right side, of the frontal.

Obtained from Hythe Church, Kent, "by a lady, under peculiar circumstances"¹. Purchased at the sale of Mr. HEAVYSIDE's Anatomical Museum, in August 1829. *Infra*, p. 44-46.

42. 907. English? Foetal calvarium. D.C.

Presented by Dr. SPURZHEIM, 1824.

¹ The "peculiar circumstances" are left to the imagination and not explained, perhaps did not admit of explanation. They might indicate heroism or devotion, as it should be recollected that the event occurred before the great doctrine of development had received that signal exemplification, *crinoline*.

43. 908. English. ♂, æt. c. 70. Imperf. calv. D.C.

B 21, C 15·3, a 5·1, b 5, c 5·2, D 15, E 7·5, F 5·6 *p*, a 4·4, b 5·2, c 4·3, G 5·5, a 4·6, b 4·9, c 4·4, J ·74, K ·73.

44. 909. English. ♂, of considerable age. Imperf. calv. D.C.

B 20·9, C 14·8, a 4·9, b 5·1, c 4·8, D 14·9, E 7·3, F 5·6 *t*, a 4·7, b 4·9, c 4·7, G 5·4, a 4·4, b 4·9, c 4·4, J ·76, K ·74.

Nos. 856, 857, and 908, 909 "out of a tomb in the chancel of an old monastery on the estate of WALTER LONG, Esq., near Salisbury." *Catalogue*.

45. 911. English? "SHARP, the assassin." ♂, æt. perhaps 60. D.C.

A 84, B 21·6, C 16, a 5·2, b 5·2, c 5·6, D 15·6, E 7·7, F 5·9 *t*, a 5·1, b 5·2, c 4·5, G 5·5, a 5, b 4·9, c 4·5, H 4·5, I 5·2, J ·76, K ·71.

A large and heavy dolichocephalic skull, which weighs 36 ounces. The usual sutures are all open, besides the frontal, with the exception of the sagittal, which is almost entirely ossified. The cranium presents a large triangular interparietal bone, which embraces the whole of the scaly portion of the occipital, the complex transverse suture running across, just above the superior occipital ridge. The surfaces of the bifrontal and uniparietal appear to have been affected with disease.

From the collection of JOSHUA BROOKES, F.R.S., and inscribed in his autograph, "SHARP, the assassin."

46. 924. English. Very imperf. calv. D.C.

B 19·3, D 15·2, E 6·4, F 5·5 *p*, a 4·5, b 5·2, c 4·1, G 5·4, a 4·6, b 5, c 4·2, J ·86, K ·84.

An exceedingly curious synostotic calvarium. All the sutures are entirely ossified, except the squamous and occipito-mastoid sutures and those around the alisphenoids. There is no trace whatever, either externally or internally, of the lambdoidal and sagittal sutures, nor of the coronal, save a merely slight indication in its middle portions. The result may be said to be the *pachycephalus* of VIRCHOW and LUCÆ, allowing for diversity; for nature will not be defined. The left parietal region is much more elevated than the right, from which it is separated by a depression.

Found below the foundations of an edifice that had stood 400 years, in the parish of Marylebone, London.

From the Anatomical Museum of JOSHUA BROOKES, F.R.S.

47. 932. English? Imp. calv. D.C.

48. 933. English? ♂, æt. c. 70. Calv. D.C.

Supposed to be the calvarium of a convict, from Van Diemen's Land.

49. 957. English. ♂, æt. c. 60. Imp. calv. D.C.
A 71.

50. 958. English? ♀, æt. c. 75. Imp. calv. D.C.
A 71.

51. 959. English? ♀, æt. c. 30. Calv. D.C.

Nos. 957 to 959 from Sierra Leone, probably from the English Cemetery. Presented by Sir RALPH WOODFORD.

52. 966. English. ♀, æt. c. 40. Imperf. calv. D.C.
A 73, B 20·5, C 15, *a* 5·2, *b* 5·6, *c* 4·2, D 14·2, E 7·2, F 5·7 *t*, *a* 5,
b 5, *c* 4·3, G 5·3, *a* 4·7, *b* 4·7, *c* 3·9, J·77, K·72.

Found under the church of St. Bartholomew the Great, London.

53. 967. English. Kent. ♂, æt. c. 50. D.C.
A 82, B 21·6, C 15, *a* 5·4, *b* 5·1, *c* 4·5, D 14·7, E 7·4, F 5·7 *t*, *a* 5,
b 5·1, *c* 4·6, G 5·7, *a* 4·8, *b* 4·9, *c* 4·3, H 4·6, I 5·5, J·77, K·77.

54. 968. English. Kent. ♂, æt. c. 50. D.C.
A 77, B 21·2, C 14·5, *a* 5·1, *b* 4·9, *c* 4·5, D 14·4, E 7·2, F 5·9 *t*, *a* 4·5,
b 5·2, *c* 4·6, G 4·9, *a* 4·3, *b* 4·6, *c* 4·3, H 4·6, I 5·3, J·82, K·68.

Another broad, platycephalic cranium from Hythe Church. Has a depression on each side, in the course of the lambdoidal suture, at the point at which it descends on the mastoid; and presents some indications of *plastic deformation* at the base, around the occipital foramen, and also of the transverse fissures more traceable in No. 905, p. 42.

55. 969. English. Kent. ♀, æt. c. 35. Calv. D.C.
B 20·1, C 14·2, *a* 4·9, *b* 4·9, *c* 4·4, D 14·2, E 6·8, F 5·6 *p*, *a* 5,
b 4·5, *c* 4·3, G 5·2, *a* 4·6, *b* 4·7, *c* 3·8, I 5·2, J·82, K·76.

Another brachycephalic calvarium from Hythe Church, having a small triangular interparietal bone.

56. 970. English. Kent. ♂, æt. c. 80. D.C.
A 76, B 20·2, C 14·5, *a* 5, *b* 5, *c* 4·5, D 15·1, E 6·7, F 5·7 *t*, *a* 5,
b 5·3, *c* 4·4, G 5·4, *a* 4·7, *b* 4·8, *c* 3·9, H 4·4, I 5, J·85, K·80.

A remarkably square brachycephalic skull, the sutures of which are almost obliterated by age.

57. 971. English. *Kent.* ♀, æt. e. 40.

D.C.

A 72, B 20·3, C 14·2, *a* 5, *b* 5, *c* 4·2, D 14·3, E 6·7, F 5·9 *t*, *a* 4·9,
b 4·6, *c* 4·3, G 5, *a* 4·4, *b* 4·6, *c* 4, H 4·7, I 5·3, J ·88, K ·74.

Nos. 905 and 967 to 971 are derived from the famous charnel-house, or crypt, under the east end of the chancel of St. Leonard's Church at Hythe, in Kent. LELAND speaks of a "fair vault under the quire," but does not mention any collection of skulls in it. The origin of these bones has given rise to many conjectures—that they are the relics of ancient Britons, of Romans, of Saxons, of Danes, of "the men of Kent." Whether any importance be attached to the omission of all allusion to the contents of the "fair vault under the quire," actually noted, and no doubt inspected, by LELAND, or not—although we may be quite sure that no one describing, however briefly, this crypt at the present day could commit such a solecism—the *condition* alone of these crania, if the evidence of form were wanting and the period of the foundation of the church itself were not conclusive, will wholly exclude the four first people named from any participation in their ownership. The specimens now described are all in a perfect state, save the loss of the teeth, which have fallen out. They still retain the larger portion, if not the whole, of their animal constituents. That they could have been exposed to the air and other deteriorating influences, even in this closed crypt, ever since the days of the Royal Antiquary, now 330 years, and maintain their present appearance is quite impossible. They are undoubtedly of more recent origin, and present the conformation of the modern men of Kent. They are remarkable for their magnitude, and for the fact that five out of six of them are brachycephalic. Their mean capacity is 78·4 oz., and the mean proportions of their breadth to their length, considered as 100, our J, is so high as 83. I have not seen the pile in the charnel-house; but a medical correspondent who visited it before these crania, Nos. 905 to 971, came into my possession, and was wholly uninfluenced by any prepossession, described them as singular for their "euboid" form and their short upright occiputs. Dr. ROBERT KNOX, to whom the science of ethnology is indebted for a valuable contribution to its philosophy, has made the Hythe skulls the subject of a memoir (*Trans. Ethnol. Soc. Lond.* 1861, i. 238), in which he has displayed much curious knowledge. Yet in this memoir the author wholly fails to solve the enigma. In one place he says, of the opinion at which we have arrived, "Whether they are, after all, anything more than a mere assemblage of such relics dug up at various times in the churchyard * * * is perhaps doubtful" (p. 242). I believe in this place Dr. Knox *touched the truth*; but, when he tells us, in the next page, that "this theory is untenable," without assigning

any reason for the assertion, we may regret that he did not lay hold of the truth and retain, instead of inexplicably losing, his grasp of it. It may be worthy of notice that of these six specimens four have belonged to men, and the two relics of women are large. If selected, this was certainly likely. Dr. KNOX says he did not observe any female crania, still he saw two of boys; and my correspondent mentions one, apparently that of a young woman¹.

Dr. KNOX recurred to this subject in *Some Additional Observations* (Trans. Ethnol. Soc. ii. 136), in which he arrives at the conclusion that the Hythe Church bones, most probably, "are the remains of men who fell in battle, but at what period has not yet been determined." He affords some further evidence. In one place, speaking of skulls on the right as you enter the crypt, those on the table and those "in the pile," about 370 in all, he says, "some resemble churchyard skulls." He admits that there has been *selection* even by the gentleman "who took a fancy to trouble himself with the labour of piling them up," and also that they are in different degrees of completeness, some wanting the facial bones. He also fully recognizes "long skulls," as well as short ones. Indeed he applied the callipers "to a good many crania, and found them generally measuring $7\frac{1}{4}$ to $7\frac{1}{2}$ inches in their antero-posterior diameter;" one measured 8 inches. As Dr. KNOX relinquished the notion of the great antiquity of the skulls, the only point of importance is whether their owners were slain in fight. The present sexton reckons the number of crania at 1200, a pretty liberal amount of killed on one battle-field. The friend who accomplished such a pious work could surely leave none behind. Among the combatants in this battle there was at least one man of about 80 (No. 970), who met his fate without a fracture of the skull, one with a rickety tibia and perhaps ulna also, some women, some children, and two boys of 8 or 10 years of age (KNOX, *ubi supra*). Was not this battle the struggle with the last enemy, death?

¹ It should be added that Dr. KNOX says, "in one instance only * * * did I find a narrow elongated cranium with the remarkable transverse depression across the head, which Mr. FOVILLE, erroneously no doubt, ascribed to tight swathing of the child immediately after birth" (p. 239). The deformation described by FOVILLE in itself deserves to be regarded as an unquestionable fact. The mere inspection of the plates in his work (*Déform. du Crâne*, 1834), taken from the life from patients in the hospital to which he was attached, seems sufficient to convince the most sceptical. At p. 23 he invites visitors to come to this Asylum to see many hundreds of cases of deformation. The testimony of Dr. L. LUNIER (*Rech. sur quelq. Déform. du Crâne*, 1852), physician to the Asylum at Niort, is exactly and amply corroborative. Still, whether the tight swathing be the sole cause may admit of some question. In some instances premature obliteration of sutures gives rise to annular deformation, although in many other cases it is probably induced by the mode of bandaging the head in infancy.

There is one remark of some importance to be made upon this series of Hythe skulls. Their brachycephalism, their size, and general forms impress the eye with a close resemblance to the skulls of modern Germans. This possibly indicates a purer Teutonic extraction for the men of Kent than for those of the other parts of England; still our Jute skulls are dolichocephalic.

58. 987. English? ♂, æt. 46. D.C.

A 90, B 22·1, C 15·9, *a* 5·9, *b* 5·2, *c* 4·8, D 15·8, E 7·7, F 6*p*, *a* 5·2, *b* 5·5, *c* 4·5, G 5·4, *a* 5, *b* 5·1, *c* 4·4, H 5, I 5·2, J 7·78, K 70.

A fine European skull, labelled by DEVILLE, "A New Zealand Chief, called Apollo," from the museum of JOSHUA BROOKES. There are traces of a name, with the age, in the autograph of BROOKES, but these cannot be read either Apollo or a New Zealand Chief.

59. 992. English. ♂, æt. e. 80. Imperf. calv. D.C.

B 21, C 14·6, *a* 5, *b* 5·1, *c* 4·5, D 14·7, E 7·2, F 5·9 *t*, *a* 4·8, *b* 4·8, *c* 4·4, G 5·3, *a* 4·6, *b* 4·8, *c* 4·1, I 5·4, J 82, K 73.

A very regular platy- and dolichocephalic calvarium, described by DEVILLE as the skull of DODSLEY, the celebrated publisher. But ROBERT DODSLEY died at the age of 61. This is the calvarium of a more aged person, of at least 80.

60. 993. English. ♀, of considerable age. Imperf. calv. D.C.

A 67, B 20·5, C 14·7, *a* 5, *b* 5·4, *c* 4·3, D 14·1, E 7·2, F 5·6 *t*, *a* 4·6, *b* 4·9, *c* 4·3, G 5·3, *a* 4·3, *b* 4·7, *c* 4·1, J 77, K 73.

Ancient tomb, Lady Chapel, Southwark.

61. 994. English. ♀, æt. c. 50. Imperf. calv. D.C.

A 79, B 21, C 15·2, *a* 4·7, *b* 5·3, *c* 5·2, D 14·6, E 7·5, F 5·5 *t*, *a* 4·4, *b* 5·2, *c* 4·6, G 5·3, *a* 4·3, *b* 4·8, *c* 4·5, J 73, K 70.

62. 995. English. ♀, æt. e. 40. Imperf. calv. D.C.

B 20·6, C 14·4, *a* 4·8, *b* 4·7, *c* 4·9, D 13·8, E 7·3, F 5·5 *p*, *a* 4·7, *b* 5, *c* 4·2, G 5, *a* 4·2, *b* 4·6, *c* 4·1, I 4·9, J 75, K 68.

Nos. 994 and 995 from an old burial-place in the parish of St. Martin's-in-the-fields, London.

63. 997. English. ♂, æt. 46. Calv. D.C.

A 87, B 21·8, C 15·3, *a* 4·9, *b* 5·3, *c* 5·1, D 15·4, E 7·8, F 5·6, *a* 5·2, *b* 5, *c* 4·7, G 5·7, *a* 4·7, *b* 4·8, *c* 4·4, I 5·4, J 72, K 73.

A large and heavy dolichocephalic calvarium, which has a frontal suture.

It belonged to a man of respectable birth, liberal education,

and large property, who committed suicide without assignable cause, March 1826.

64. 1002. English. ♀, æt. e. 18. Calv. D.C.
A 80, B 20·5, C 15, *a* 5·3, *b* 4·9, *c* 4·8, D 14·7, E 7·2, F 5·5 *t*, *a* 4·7,
b 4·8, *c* 4·3, G 5·5, *a* 4·7, *b* 4·7, *c* 4·2, I 4·9, J ·76, K ·76.

A well-formed calvarium of good size, which is slightly unsymmetrical.

It belonged to a fine young woman, who was cruelly hanged for infanticide. Presented by Sir ASTLEY COOPER to Mr. J. DEVILLE.

65. 1016. English? ♂, æt. e. 60. Calv. D.C.
A 70, B 20, C 14·4, *a* 4·6, *b* 4·4, *c* 5·4, D 15, E 6·9, F 5·4 *t*, *a* 4·5,
b 4·6, *c* 4·5, G 5·4, *a* 4·6, *b* 5, *c* 4·4, I 5·3, J ·78, K ·78.

A long, low, cylindrical, and symmetrical calvarium of a convict, from New Holland, with remarkably depressed frontal region, presenting much of the appearance of an artificially distorted skull. The sagittal suture and the middle portions of the lambdoidal are almost wholly ossified, which synostoses are probably at the base of the peculiar conformation of the calvarium, although it does not quite coincide with VIRCHOW'S law. The coronal suture and those in the temporal regions are entirely open, yet the frontal bone is narrow and exceedingly depressed. The appearance is as if the synostosis had the effect of drawing the brain backwards to the superior occipital region. There is probably "plastic deformation" of the base. The semicircular lines for the attachment of the temporal fasciæ are only 3·7 inches apart.

66. 1026. English. ♂, age uncertain. Calv. D.C.

The calvarium of a West-Indian planter.

The sagittal, the coronal, and almost the whole of the lambdoidal sutures are obliterated. The result is an elevated, short, broad calvarium, with very prominent superoccipital region, an aero-pachy-spheno-cephalism, not embraced in LUCÆ'S definitions. The *pseudo-raphæ* at the sides of the occipital are not ossified. The sutures around the alisphenoids, the squamous plates of the temporals, and above the mastoid processes, are all open. This calvarium closely resembles that of LUCÆ'S Tafel II. fig. Ia, 229, except in the absence of Wormian ossicles. *Schädel abnormer Form.*

67. 1029. English. ♂, æt. e. 70. Calv. D.C.
A 94, B 22·8, C 16·6, *a* 5·8, *b* 5·2, *c* 5·6, D 16·9, E 8, F 6·3 *t*,
a 5·1, *b* 5·5, *c* 4·8, G 5·7, *a* 5·3, *b* 5·5, *c* 4·9, I 5·9, J ·78, K ·71.

An enormous, thick calvarium of unknown origin, of an old

man, remarkable for its size and weight, which is 40·5 oz., and for its very low forehead, receding behind supraorbital ridges of most unusual prominence.

Has a very close resemblance to the celebrated Neanderthal skull, only that the frontal region is not quite so much depressed. It is synostotic in the situation of the coronal suture, the lower outer portions of which, on both sides, are fully ossified and obliterated, whilst its central portion is nearly so. The whole of the lambdoidal suture is almost effaced, and the sagittal only a little less so. The sutures surrounding the alisphenoids and the squamous sutures are at the same time quite open. This calvarium owes its peculiarities of conformation to the synostotic condition described, without doubt. The early closure of the



Fig. 59.—Cranium of an Englishman.—No. 1029.—One-third size.

lateral segments of the coronal suture has arrested the development of the frontal region, and diverted that of the brain backwards; whilst the frontal sinuses and the supraorbital ridge have continued to increase to a more than normal size. In the case of the Neanderthal calvarium there is good reason to think it is the same, and that the difference between the two is one of degree only. Professor SCHAEFFHAUSEN says, "the coronal and sagittal sutures are on the exterior nearly closed, and on the inside so completely ossified as to have left no traces whatever, whilst the lambdoidal remains quite open"¹.

¹ Mr. BUSK's translation, *Nat. Hist. Rev.* i. 157. Dr. FUHLROTT has been so polite as to examine the Neanderthal relic (which is in his possession) with much care, and to furnish me with the results. These confirm my conjectures, and show that it is the subject of extensive synostosis of the cranial bones. See the full explanations given in a memoir entitled, *The*

Neanderthal Skull: its peculiar Conformation explained Anatomically. By JOSEPH BARNARD DAVIS, M.D. *Mem. Anthropol. Soc.* i. 281^a.

The view here taken stands sadly in the way of the strange unsubstantial speculations to which this calvarium has given rise, and clearly deprive it of the distinction of being the much desired "missing link." No. 23, the skull of a French woman, and others in the collection resemble this in the *lowness* of the frontal region, and from the same cause.

The memoir of the author has given rise to a criticism by Professor THOMAS H. HUXLEY, F.R.S., which is rather of a verbal nature, and appears to have a somewhat querulous tone, in the Appendix, Note A, to Messrs. LAING and HUXLEY's *Prehistoric Remains of Caithness*, 1866, a copy of which I owe to the politeness of the Professor. This criticism seems to contain little of importance, but has been deemed of sufficient moment, by a writer to me unknown, to induce him to censure its spirit and to oppose some of its assertions^b. Hence, from the source whence it is derived, it probably ought to receive some notice here, at least for the enlightenment of "those who are unable to examine the matter for themselves."

Professor Huxley first of all tells us that "The insufficiency of the explanation was, immediately afterwards, clearly demonstrated by Dr. THURNAM, to whose valuable memoir 'On Synostosis of the Cranial Bones' I may refer those who are desirous to learn the conditions under which, alone, the doctrine of synostosis is applicable to the explanation of cranial peculiarities. Nevertheless, as I find that Dr. DAVIS's 'explanation' is still quoted as all-sufficient, to the delusion of those who are unable to examine the matter for themselves, I will say a few words upon the subject here; though, really, after Dr. THURNAM's paper, controversy of the synostotic explanation is as much a work of supererogation as would be that of the 'idiotic' hypothesis which was so long held by other instructors of the public" (p. 149). My remarks seem, therefore, to require to be distributed under two heads:—

I. As I had read my friend Dr. THURNAM's memoir when it appeared in the *Nat. Hist. Rev.* for April 1865, without the slightest consciousness that it clearly demonstrated the insufficiency of my explanation, I have turned to it again, in order to ascertain what it really contains. This paper is written in support of an hypothesis of the existence of a prehistoric race of men in the British Islands, distinguished by having dolichocephalic skulls, burying their dead in "dolichotaphic" barrows, and, I believe, forming flint weapons of shapes differing from those of other races. Some time since, I discovered that there were many cases of synostosis of the cranial bones among the longer skulls of the ancient Britons. The truth of this Dr. THURNAM was led to admit, and subsequently conceived the design of attempting to show that, in this case, it was a "race-character," which, if it could be proved, he considered would lend support to his larger hypothesis. Hence he produced this memoir, the title of which is sufficiently explicit. It is, "*On Synostosis of the Cranial Bones, especially the Parietals, regarded as a Race-Character in one class of Ancient British and in African Skulls.*"

Dr. THURNAM first of all remarks that, "in order that synostosis of the

^a In this memoir the writer confined himself almost strictly to the determination of the anatomical value of the peculiar conformation of the Neanderthal skull. The distinguished Prof. Cavaliere ANTONIO GARBIGLIETTI, of Turin, who was appointed by the Royal Academy of Medicine of that city to make a report upon the memoir, has, in a series of excellent Notes to his Report, in some measure supplied the deficiency, and has considered some of the curious and interesting questions which have been supposed to be in one way or another illustrated by the Neanderthal skull. *Intorno all' Opuscolo del Dottore Giuseppe Bernardo Davis sul Cranio umano subfossile di Neanderthal.* Relazione del Dottore Collegiato Cavaliere ANTONIO GARBIGLIETTI. *Giornale della R. Accad. di Med. di Torino*, 1865.

^b *The Reader*, No. 164, Feb. 17, 1866, p. 180.

cranial bones should be the cause of an abnormal form of skull, it must commence at a very early period of life, if not, indeed, during the foetal condition." As Dr. THURNAM was first led to the study of synostosis of the cranial bones by perusing a memoir of mine, in manuscript, *more than two years before* he wrote his own, it may be well to see what this latter contains upon this primal point, the earliness and prematurity of the synostosis, the great essential with reference to resulting abnormal skull-forms. At pages 19 and 20 of the printed memoir (*On Synostotic Crania among Aboriginal Races of Man*, 1865) I have attributed that closure of the sutures which results in the deformation of the calvarium to a period previous to birth. Dr. THURNAM next opposes the idea that the dolichocephalism of the ancient Britons is *pathological*. I am not aware that I have said that it is truly pathological, or that the synostosis in the case of the Neanderthal is pathological. What I have said is that it is *abnormal* and premature, and that the fact of the consequent deformation proves that it is effected before the calvarium has attained its development.

We next come to a passage which does *refer* to my views on the Neanderthal skull; and it is the only direct reference; hence I will quote it entire. "In a recent paper by Dr. J. Barnard DAVIS, the doctrine of synostosis appears to me to be carried beyond its just limits, with a view of explaining the peculiarities of the now celebrated Neanderthal skull. That it is synostotic is not to be doubted, though how far its peculiarities have been produced by the obliteration of the sutures appears doubtful. However this may be, there is one passage," &c. Surely this is not the language of clear demonstration of the delisiveness of my doctrine. It is simply, *after a full acknowledgement that the skull is synostotic*, an expression of a doubt whether I may not have carried my mode of explanation too far. Dr. THURNAM then quotes a passage of mine, on which he says he wishes to make a few observations. This passage mentions a point which I had noticed, that the complete ossification of the sutures surrounding the alisphenoid, when the sides of the coronal are also prematurely obliterated, gives rise to an elongation of the calvarium, in some cases, without closure of the sagittal suture. This observation is a mere question of fact, to be taken or rejected on the testimony of the observers. The point at issue is, whether it "produces" any degree of dolichocephalism. Dr. THURNAM himself admits that "some degree of compensatory growth in the direction of the occiput may be allowed." As I have never asserted that it produces a *great prolongation of the calvarium*, it is perhaps needless to make any further remark on this passage. The degree is only to be demonstrated and ascertained by inspection of individual examples.

Dr. THURNAM says, "as premature senile obliteration, according to Professor WELCKER, may occur as early as the twenty-fifth year, it will scarcely be possible, in crania of a mature or moderately advanced period of life, to assign any high value to the connexion between the obliteration of the sutures and any peculiarity in the form of the skull, especially as regards the slighter deviations from what is normal. Indeed, for such a purpose, observations on the skulls of the young can alone be depended upon." The ossification of sutures, as is well known, in different individuals, takes place at all ages from the foetal state to extreme old age, and not always then. I have the cranium of a woman of 110 years of age, which has its *frontal* suture open.

Professor WELCKER has endeavoured, by certain appearances in the ossified sutures, to distinguish between infantile and senile obliteration; but he has not said, where there is deformation, whether slight or otherwise, that the obliteration is senile. According to the argument of Dr. THURNAM, this is a question of degree. Where deformation is considerable, it is then infantile, and, no doubt, occasioned by the existing synostosis: the connexion between the two is undeniable. But where the deformation is inconsiderable, the synostosis is or may be senile, and the existing deformation may be no result of it. This argument it is not necessary to refute, as, if synostosis will produce considerable deformation, there can be nothing to prevent its occasioning

slight deformation; and in both cases it must be premature, or there could be no deformation. Nor is it at all requisite to show that synostotic deformations may be and are constantly recognized without any difficulty in the skulls of persons of all ages.

Dr. THURNAM, lastly, goes on to question whether the *slighter grades* of postcoronal depression, observed in synostotic skulls of ancient Britons, are to be attributed to synostoses in the temporal region, *not* the region of the temporal bones. The general fact that this synostosis, "when originating before the perfect formation of the cranial bones," produces klinocephalism, he does not doubt. His only doubt is when the klinocephalism is slight; and he also adduces cases of slight klinocephalism where there was no synostosis. Again, I have only related what I have observed, and have never said that this obliteration of sutures in the temporal region is *invariably* seen in cases of slight klinocephalism. As a conclusive instance of the fact that ossification of the temporal portions of the coronal suture really produces klinocephalism, I may refer to the calvarium of a Marquesan Islander, from the island of Uahuga, No. 597. Although this calvarium has a persistent frontal suture, yet the premature closure of the lateral portions of the coronal suture has given rise to a constriction across this latter part of the skull^a.

I have now gone through all Dr. THURNAM's objections to my views, without omitting anything, that I am aware of, which is of the slightest importance, and may, in conclusion, ask, Where has he "clearly demonstrated the insufficiency of my explanation" of the cause of the peculiar form of the Neanderthal skull? I cannot discover that he has even made the attempt to do so. He has, I am aware, made slight objections to some opinions I have expressed upon minor matters; but if he had the larger design attributed to him, he has omitted to mention it. This would be at once apparent if, for the moment, we were to allow every objection he has made to my views. The fact that the Neanderthal skull is both considerably deformed and extensively synostotic in the sagittal and coronal sutures, whilst the lambdoidal remains open, and that it has obtained its particular deformation from this premature ossification of certain sutures, remains wholly untouched by Dr. THURNAM. He has entirely passed it over, although he has made some objections to views I have expressed whilst discussing this greater argument;

^a It is singular that the very case of ROKITANSKY, to whom Prof. OWEN attributes, whether correctly or not, the first conception of a transverse contraction of the cranium at this point *being owing to synostosis*, was exactly of this nature, the obliteration of the lower ends of the coronal suture for rather more than half an inch. Prof. OWEN makes a theoretical objection to this explanation of the phenomenon, but does not attempt to deal with the plain and obvious fact of common occurrence more than designating it a *coincidence* (*Anatomy of Vertebrates*, 1866, ii. 570). It is a coincidence which is frequently recurring. Without disputing Prof. OWEN's remark, that "the growth of the brain governs the capacity of the cranium," it may be safely asserted that, if the growth of the brain does not influence its bony case "by mechanical expansion," the results of compensatory growth in cases of partial and premature synostosis of the cranial bones are so indistinguishable from those which would ensue from mechanical expansion produced by pressure of the brain, that they may well be spoken of as such results. The brain receives a sudden check during foetal life in its natural expansion in one direction, and subsequently the bones bulge out in another direction, where the sutures are open, in order to compensate for the unnatural contraction which the organ has suffered at the first point. It should be noticed that if this is not a consequence of the operation of mechanical laws, the change of form of skull is in perfect agreement with that change which it should have undergone according to the laws of mechanics. The action is not *merely* mechanical, and has never been maintained to be such; but that the brain can be exempted from mechanical laws passes conception.

and I have no reason whatever to know, or even to suspect, that he doubts this main fact, which is the only thing Professor HUXLEY wishes to call in question. Suppose that synostosis of sutures in the temporal regions, when the ends of the coronal are implicated, does *not* lead to any lengthening of the calvarium, although Dr. THURNAM admits that it may do so—suppose that slight klinocephalism does *not* arise from synostosis in the temporal regions (Dr. THURNAM allows that *serious* synostosis in these regions *produces* klinocephalism)—still it is beyond all controversy that extensive ossification of the coronal and sagittal sutures whilst the lambdoidal continues free (and this fact proves the anomalous nature of the ossification) produces elongation of the calvarium, or dolichocephalism. These are the phenomena presented by the Neanderthal skull, and which cannot be got rid of. And, unless we were to admit absolutely Dr. THURNAM's position, that nothing can be known as to the influence of synostosis, except by observations on the skulls of the young alone (*i. e.*, as I understand the assertion, with a view of seeing the synostosis in its incipient stage), there is no point in his argument that may not be conceded without its at all interfering with or invalidating my "explanation." And as to this latter affirmation, it is contradicted by all experience. Look at the works of Professor LUCÆ, and see what numbers of crania of persons of adult, middle, and of old age they contain, whose previous history is wholly unknown, in which the deformations resulting from premature synostoses are pointed out as clearly and unhesitatingly as if they had been inspected when young. In truth (the rare cases, and they are few in number) are those seen in youth, as that of the Pomeranian Weaver, whose extraordinary scaphocephalic skull I have figured and described. Finally, it may be safely said that "the conditions under which alone the doctrine of synostosis is applicable to the explanation of cranial peculiarities" are all present in the Neanderthal case, and that Dr. THURNAM has not pointed out the absence of one of them.

Indeed it seems most likely that the object of Dr. THURNAM's memoir has been wholly mistaken. It was not written to oppose my views respecting the Neanderthal skull at all. I have every reason to believe, as before said, that it was written to support his own hypothesis of a peculiar and distinct dolichocephalic race of ancient Britons, which had been shaken by my observation of the frequent occurrence of synostosis in these dolichocephalic skulls, that I regarded as the cause of the dolichocephalism itself. All points relating to the Neanderthal only come in, as it were, incidentally; and so far from Dr. THURNAM having demonstrated the erroneousness of my view on this skull, he neither did nor ever designed to do so. I had the pleasure to exhibit my synostotic skulls to Dr. THURNAM's careful examination, and afforded him all the information he desired about them. The purpose he had in view by this examination was quite unknown to me; so that I can only judge of it from his memoir; and the inference I draw from this is, that Dr. THURNAM was, in the first place, desirous to deny as far as possible the influence of synostosis in producing cranial deformation, and then, as this could not be done conclusively, to turn this synostotic influence to account in support of his great hypothesis, and endeavour to show that it really *established* a pre-Celtic race, by proving that the frequent synostosis was neither more nor less than a race-character. Whether such subhypothesis be true or not there is no need whatever to inquire. In making these remarks, I beg that I may not be misunderstood. I have faith in facts; and Dr. THURNAM has done quite right to employ any facts he has acquired a knowledge of to refute any views I may have formed, if he considers them erroneous. What I object to is the application by Prof. HUXLEY of an immense magnifying power to Dr. THURNAM's objections to my views, so as to distort them and to pass them off as a refutation of my "explanation."

II. Let us now turn to Prof. HUXLEY's original comments in support of the Neanderthal cranium being an evidence of the developmental notion, or that man is deduced from apes. These are contained in six notes on a passage from my memoir. They shall all receive attention *seriatim*.

(1) The first reiterates that the frontal sinuses and supraciliary ridges of the Neanderthal are the largest known in any human skull. Whether it were worth while to put this in so emphatic a manner after I had written, "synostotic calvaria of like conformation and only differing in *degree* do occasionally occur," I shall leave others to determine. We shall soon see that there is a large series of human crania which may be for convenience called pseudo-Neanderthal, or Neanderthaloid, and that, at present, the true Neanderthal stands at the head of the series; but that it will maintain this position long is uncertain. Until I directed attention to the synostotic skull of the Pomeranian Weaver, the most exaggerated scaphocephalic skulls known were all figured in Professor VON BAER's memoir (*Die Makrokephalen im Boden der Krim und Oesterreichs*, 1860). Now, these examples must hide their diminished heads before that of the weaver of Stettin, which is nearly 9 inches long, and has a cephalic index of about '55, I am persuaded quite beyond Prof. HUXLEY's experience. Such also may ere long be the fate of the Neanderthal cranium itself. Neanderthaloid skulls, or skulls deformed in a similar way from the same cause, may be produced, which are only a little less in these points than the Neanderthal itself; but a difference of degree does not and cannot carry over a deformed synostotic skull into some other section of crania, not synostotic.

(2) "The same peculiarity," *i. e.* abnormal synostosis of the same sutures, does exist in the Neanderthal and in No. 1029. The coronal and sagittal sutures are ossified in both. It may be advisable to quote for the benefit of "those who are unable to examine the matter for themselves." "This enormous calvarium does not agree very closely in its form with the Neanderthal example; it is not so depressed in the frontal and vertical regions; but it owes its peculiar conformation to precisely the same cause, irregular and premature ossification of the sutures. And the points in which it agrees, as well as those in which it disagrees, with the Neanderthal calvarium, admit of ready explanation by a close reference to the points of obliteration of sutures in which they agree or differ." *Mem. Anthropological Society of London*, vol. i. p. 290.

A word or two on Prof. HUXLEY's reduced copy of BLUMENBACH's *Batavus Genuinus*. This is not a synostotic calvarium at all, but one in which an original defect of development in the brain has led to a coincident arrest of growth of the alisphenoids, and consequent great depression of the whole frontal region. In the original Table lxiii. (for here again, as in the case of the Neanderthal, Prof. HUXLEY's figure is unfaithful) the alisphenoid is reduced to a narrow spine of bone running out into a slender point, which just touches the parietal. In the woodcut a substituted fronto-squamous suture is introduced, which would, did it exist in the skull itself, be nearly half an inch long, for BLUMENBACH's Table is evidently much below the size of nature.

(3) I have said, the unusual depression of the frontal bone in the Neanderthal skull gives rise to an exaggerated prominence of the supraciliary ridges; Prof. HUXLEY, that "the enormous development of the supraciliary ridges make (*sic*) the contour of the frontal look more retreating than it really is." Possibly he may be right. It is merely a mode of accounting for the exaggerated appearance, and assuredly not worth contending for.

(4) I know nothing of the sutures surrounding the alisphenoid in the Neanderthal, nor, I believe, does Prof. HUXLEY, save what I can learn from Professor FUHLROTT's statement. I was quite aware that this statement was not so explicit as it might have been (probably for the best of reasons, and I strove to preserve this in the rendering of it, giving an ambiguous expression) in the original. I had doubts upon an obscure point, and thus indicated them, although I had no hesitation in saying that, in Prof. HUXLEY's own photograph from the Neanderthal, "there is no appearance of the coronal suture, or of any suture, in the temporal region." *ib.* p. 283. That the point itself was not at all essential to my "explanation," Prof. HUXLEY has proved by directing attention to No. 1029, where the sutures surrounding

the alisphenoids are all open. This is hardly an example of "oversetting," such as Prof. HUXLEY insinuates. After this, in reasoning upon the statement, I took care only to say "all of which *appear* to have been prematurely ossified in the Neanderthal skull." This note of Prof. HUXLEY shows the nibbling nature of his criticism upon unessentials. If Prof. HUXLEY can show that the sagittal and coronal sutures of the Neanderthal have never been ossified, he may then find a basis on which to build a refutation of my "explanation;" but without this, notes and comments only show the desire to refute.

(5) In commenting on the last point, I have considered that Prof. FUHLROTT's expressions would allow that the sutures surrounding the alisphenoids in the Neanderthal are obliterated, and took these latter to be the bones forming the "temporal regions." It is quite unnecessary to catch at this ambiguous expression and to write about the "temporal bones." I have just shown that, whether my consideration be right or wrong, my "explanation" is unassailable.

(6) This grammatical remark is decidedly the best point in Prof. HUXLEY's commentary. An elliptical expression of mine has led to an amusing comment, at which I was so inconsistent as to smile. I hope the writer equally forgot himself. That such expressions are not strictly proper to myself, may be seen by referring to the *opening sentence* of Prof. HUXLEY's "Notes upon the Human Remains from Keiss."

(7) The statement made with respect to the solid "crest of the Gorilla" has the very highest authority, and is not invalidated by the example in the Museum of the College of Surgeons, of a skull in which "the frontal sinuses are enormous and the walls no thicker, in proportion, than in man." A large frontal sinus in the Gorilla may be coincident with a great supraciliary crest. With regard to the *solidity* itself there is variety.

(8) I have not said that the squamous sutures of the Neanderthal calvarium are closed, as I have no reason so to say. The compensatory growth of the bones of the calvarium at their sutural edges does not give rise to dislocation.

(9) After I had pointed out the obvious cause of the great and unusual length of the Neanderthal calvarium to be the premature ossification of its longitudinal sutures, a fact which is undeniable, the final replication to my "delusive explanation" comes in the form of a reference to figures of casts of the interior of the calvarium itself and of that of an Australian. These, Prof. HUXLEY assures us, "correspond so closely that their differences are insignificant." The Australian, he adds, is absolutely longer and absolutely narrower. These two latter points it would have been the easiest thing in the world to have predicated, because they are inherent and indelible race-characters of Australians. Length, lowness, and narrowness of skulls and of brains are the natural and ineffaceable characteristics of these people. The comparison of two things so absolutely and essentially different cannot prove anything, at all events anything useful. It is no part of my philosophy to confound things in their nature different. To overlook or ignore such differences would be in me inexcusable. I have contented myself to study natural differences and to interpret them as well as I am able. In this spirit I would call Prof. HUXLEY's attention to a few facts which may not be unworthy of his notice.

First, I would say, that my No. 1029 is not the only synostotic skull resembling the Neanderthal in my collection, but that I have others, and that many other such exist in different anatomical museums, all owing their Neanderthal-like peculiarities to the same cause of *synostosis*. Some of them, I have reason to expect, will, ere long, be described by distinguished anatomists, and we shall have a tribe of Neanderthaloid crania. One from Louth,

^a OWEN, *On the Osteology of the Chimpanzees and Orangs*, Trans. Zool. Soc. vol. iv. p. 81.

in Ireland, was brought before the British Association last year at Birmingham, and was very well described by Mr. C. Carter BLAKE, F.G.S.

Professor LUCAE, in his *Architectur des Menschenschädels*, Taf. v., gives a profile and a vertical view of a Neanderthaloid calvarium. In this, although the sagittal suture is tolerably open, the coronal on both sides is obliterated, and, on the left side, the anterior extremity of the parietal bone is synostosed with the squamosal. This instance presents far less ossification of sutures than the Neanderthal, yet the resulting deformation is somewhat of the same form—great depression of the frontal region, accompanied with prominence of the supraciliary boss.

After all, some of the most conclusive evidence for the truth of my "explanation" is supplied by Prof. HUXLEY himself. However strange this may appear, it is perfectly correct. He gives a description and figures, 44-47, in his work on "Caithness Remains," of a calvarium found near Sudbury Hall, in Derbyshire, with very prominent supraciliary ridges, of which he says, "a little flattening and elongation, with a rather greater development of the supraciliary ridges, would convert this into the nearest likeness to the Neanderthal skull which has yet been discovered" (p. 115). If we ask what is the cause of this "nearest likeness to the Neanderthal skull which has yet been discovered," whether it has any relation to the synostotic anomalies observed in the latter, we learn from Prof. HUXLEY that "the middle part of the coronal suture, between the temporal regions, is completely obliterated. The sagittal suture is for the most part obliterated. The parietal bones are raised up into a strong broad flattened ridge in about the middle of their length * * *. The middle of the lambdoidal suture is obliterated" (p. 115). The truth peeps out. This Sudbury calvarium is extensively synostotic in many of the same points as the Neanderthal, and the resulting deformations, *from the same cause*, have been very similar; hence it is "the nearest likeness to the Neanderthal skull which has yet been discovered." It could not be otherwise, if my "explanation" is to be relied upon and is *not* delusive. This is a tolerably "clear demonstration," but on the wrong side. I trust I may be excused for remarking that it is satisfactory to see the greatly increased attention Prof. HUXLEY now pays to the condition of the sutures as to ossification, in the skulls he describes, since he has perceived the importance of synostoses.

Prof. HUXLEY subsequently figures another Neanderthaloid calvarium, from the bed of the Nore, at Borris, in Ireland, figs. 60 & 61. The figures are derived from a cast supplied by Professor Perceval WRIGHT; and information I owe to the kindness of this polite gentleman leads me to conclude that they are tolerably correct. The coronal, sagittal, lambdoidal, and sphenoparietal sutures of the original are all closed and mostly obliterated, whilst the temporo-parietal, or squamous sutures, on both sides are perfectly free and open. This is a case of synostosis closely resembling my No. 1029 and the Neanderthal itself in its deformation. It is a remarkably long (8 inches) platycephalic calvarium, with depressed frontal region and prominent supraciliaries. The reasons for these peculiarities of form are quite obvious when the synostoses are recognized and their effects duly estimated. In truth, it is needless to look further for the causes of those peculiarities which led Prof. Huxley to write, "The larger skull from the same locality is one of the most remarkable European skulls I have met with" (p. 125). I forbear to apply Prof. HUXLEY's own hypothesis to the explanation of these his own facts. To say that it is wholly incapable of explaining them, is to say scarcely anything.

That a cloud of witnesses have stepped forward to impugn the great antiquity of the whole of the remains described and commented on by Prof. HUXLEY (*Anthrop. Rev.* iv., cxxxix., &c.), although of great moment to his argument, need not obtain any further notice here.

Subsequently Prof. HUXLEY has affirmed that some English writers have misunderstood or misinterpreted VIRCHOW and other anatomists; and he

has further advanced to an attempt at a demonstration larger than the positions maintained in this Appendix.

1. He has met with a "Tartar" calvarium, which is extremely *brachycephalic*, and yet has the sagittal suture wholly obliterated. Hence, with a desire to get rid of the disagreeable element of synostosis, in the case of the Neanderthal skull, by asserting that, if synostosis of the parietals produces elongation of the calvarium in one case, it must do so in all cases, he actually runs near denying the deforming influence of synostoses altogether. But this is no true deduction from nature, it is rather more like an attempt to give laws to nature, and it is quite erroneous. I am not aware that any of the German anatomists have pointed out that there is no such absolute law between synostosis and deformation, even in the case of the most remarkable species of synostosis, that between the parietals. Nevertheless Prof. HUXLEY's "Tartar" calvarium is but an exemplification of a position laid down in my memoir *On Synostotic Crania among Aboriginal Races of Man*. At p. 27 I have said, "Viewing premature ossification of the sutures in its relation to deformation of the calvarium, numerous examples prove that *this deformation is by no means a necessary and invariable consequence of synostosis.*" After which I have adduced examples of two skulls, one of an Australian woman, No. 915, the other of a Fatuhivan, No. 789, presenting entire ossification and obliteration of the sagittal suture, and both of *early age*, and of a third cranium of an African Negro, No. 100, in all of which deformation is absent. Indeed probably the most brachycephalic calvarium in this entire Collection, parallel with Prof. HUXLEY's "Tartar," that of the Pokomama, No. 378, presenting a cephalic index of 1.08, belongs to this very category, and offers no trace of sagittal suture. In this instance the synostosis has in all likelihood been *congenital*, still the artificial deforming influence applied in early infancy has counteracted its effects wholly.

At page 30 of the above named memoir I have gone beyond this, and further pointed out that "*scaphocephalism is far from being the usual result of the early ossification of the sagittal suture.*" This position is maintained by an analysis of the twenty-seven skulls in this Collection which present no appearance of sagittal suture, but only four of which are true *scaphocephali*. For these and other curious particulars I may refer to the memoir itself.

Hence it results that the want of uniformity in the effects of synostoses was well known before Prof. HUXLEY noticed this "Tartar" skull, which does not at all invalidate my "explanation;" and it was also fully understood that the deformative results of synostoses are contingent upon different accessory conditions, which conditions were present in the case of the Neanderthal skull. To go into any examination of these accessory conditions would be quite out of place here.

2. The next point to which Prof. HUXLEY has given his support is that, seeing the "Tartar" skull and other examples, it may be safely asserted that, when a synostotic cranium presents itself, it cannot be determined at what period the synostosis took place; which, if true, would confuse intra-uterine synostosis with senile, and jumble all cases together in one sepia-cloud, out of which the Neanderthal might make an easy escape.

The conditions indicative of the prematurity of synostosis are, as already hinted, various, perhaps at times difficult to estimate justly; but there is one key for the solution of Prof. HUXLEY's problem of very general application, *i. e. deformation*. This key has been employed in the preceding remarks without explanation, as its rationale has appeared self-evident. If we have considerable deformation, as in the case of No. 1029 and the Neanderthal skull, we cannot be in any doubt as to the period of synostosis. It could only take place, like an arrest of development, at an extremely early time of life. After this period was passed, the unpliant cranial bones no longer admit of that modelling which would be necessary for any important deviation from the normal form, *i. e.* for the production of those forms which they have acquired.

68. 1030. English? ♀, æt. c. 70. Calv. D.C.

69. 1032. English? ♂, æt. c. 35. D.C.
A 78·5, B 21·2, C 15·1, a 4·8, b 5·3, c 5, D 14·5, E 7·5, F 5·6t, a 4·8,
b 5·1, c 4·6, G 5·3, a 4·5, b 4·6, c 4·3, H 4·8, I 5·4, J 7·4, K 70.

70. 1033. English? ♀, æt. c. 80. D.C.

The jaws are entirely edentulous, and the alveoli wholly absorbed; yet the frontal suture is quite open from end to end, as well as almost all the other sutures. A constriction across the calvarium, immediately behind the coronal suture, renders it doubtful whether the skull may not have been modified by art unintentionally.

71. 1034. English. ♀, æt. c. 80. D.C.

Another skull of an aged person, with the masticatory organs just in the same deteriorated state.

72. 1036. English. ♂, æt. c. 20. D.C.

A fine skull, having an interparietal bone.

73. 1037. English? ♂, æt. c. 40. Calv. D.C.

This is a most remarkable irregularly deformed cranium, of unknown origin, which might be cited to sustain the dreamy speculations concerning barbarians with one eye before the other. Such is literally the case here. The face is so twisted that the right side is on a plane anterior to that of the left. The calvarium presents an oblique ridge along the centre of the frontal, which extends into the left parietal. It is asymmetrical on the two sides. The line of the lambdoidal suture, which is entirely ossified, may be traced throughout. From the tip of the occipital, which is inclined to the right, the almost obliterated sagittal suture advances, and proceeds forward obliquely to the left, till it meets the frontal ridge, the left half of the coronal suture being still tolerably distinct. There is not the slightest trace of the right half of the coronal. The very early and premature closure of this portion of the coronal suture has produced a defective development of the right side of the calvarium, which has been compensated by the growth of the left at its posterior part, and has laid the foundation of this singular deformation. This is a curious and instructive instance of *synostosis*, a case of *plagiocephalus*. *Untersuchungen über die Entwicklung des Schädelgrundes, u. s. w.*, Von RUDOLPH VIRCHOW, 1857, S. 78. The subject has received much further illustration from Prof. J. C. G. LUCÆ, *Zur Architectur des Menschenschädels*, 1857, i.; *Schädel abnormer Form*, Taf. vi. fig. 2, Taf. ix. The calvarium figured in the earliest work of Prof. LUCÆ

on this subject, *De Symmetria et Asymmetria Cranii*, 1839, Tab. I. et II., is that to which especial reference must be made, as No. 1037 very closely resembles it. The skull, which is in the collection at Marburg, is figured again by LUCAE in his *Architectur*, as already noted, and also by WELCKER, *Wachsthum und Bau des menschlichen Schädels*, Taf. xii. fig. 2 und 3. WELCKER has been able to trace a remnant of the coronal suture on the right side, and thus to correct the notion of LUCAE, that the fronto-parietal bone of this side was developed from one centre of ossification. *Ib.* S. 113. In No. 1037 there is not the slightest remnant or trace of the right half of the coronal.

74. 1038. English? ♂, æt. c. 70. Calv. D.C.

Has a small process projecting outwards below the posterior root of the zygoma.

75. 1039. English. ♀, æt. c. 70. Calv. D.C.

76. 1041. English. ♂, æt. c. 80. Calv. D.C.

77. 1042. English? ♂, æt. c. 70? Calv. D.C.

78. 1043. English. ♂, æt. c. 70. Calv. D.C.

Affected with *hyperostosis*, and weighs 33 ounces.

79. 1044. English. ♂, æt. c. 60. Calv. D.C.

A 74.

80. 1045. English. ♂, æt. c. 40. Calv. D.C.

A56, B18·5, C13·3, a4·5, b4·8, c4, D13·6, E6·5, F4·9 t, a4·2, b4·1, c4, G5·1, a4·3, b4·4, c3·7, I5, J·75, K·78.

A *microcephalic* calvarium of, most likely, an *idiot*. The microcephaly has been dependent on premature synostosis. The sides of the coronal suture in the temporal regions are entirely obliterated; in the rest of its course it is perfectly ossified. The sagittal suture also is ossified in its whole extent, with scarcely a trace left behind; and so likewise is the lambdoidal in all the middle portion. The prominent supraciliary ridge and very depressed forehead assimilate this calvarium to that famous one from the Neanderthal cavern, and especially so as they both owe these peculiar features to the same cause. The internal capacity of this calvarium is 68·1 cubic inches. This would contain an encephalon weighing only 36·3 ounces avoirdupois, or 1027 grammes, assuredly the brain of an idiot. Since this was written I see Prof. CARL VOGT states that idiocy begins in the male at about 1000 grammes, in the female at about 900. *Vorlesungen über den Menschen*, 1863, i. 103.

81. 1046. English? ♂, æt. c. 80. D.C.
 A 76, B 20·6, C 14·6, *a* 5, *b* 5, *c* 4·6, D 14·8, E 7·3, F 5·5 *t*, *a* 4·5,
b 4·9, *c* 4·6, G 5·4, *a* 4·5, *b* 4·8, *c* 4·2, I 5·2, J 7·5, K 74.
 Reference.—E. SANDIFORT, *Museum Anatomicum*, 1793, fol.,
 vol. ii., "Cranium Angli."

Average Measurements of English Skulls.

- Males*, 12 tolerably perfect, A 80·2, B 21·4, C 14·2, *a* 5·1, *b* 5·2,
c 5, D 15·1, E 7·5, F 5·8, *a* 5, *b* 5·2, *c* 4·5, G 5·5, *a* 4·7, *b* 4·9,
c 4·3, H 4·7, I 5, J 7·7, K 73.
 9 not so perfect, B 21, C 15, *a* 5·1, *b* 5·1, *c* 4·9, D 14·7, E 7·3,
 F 5·6, *a* 4·7, *b* 4·9, *c* 4·3, G 5·3, *a* 4·7, *b* 4·9, *c* 4·1, J 7·6,
 K 72.
 Extremes, A 69–92·5, J 71–85, K 65–83; 5 of the 21 brachycephalic.
 Hythe skulls, 4 males, A 80·1, B 21·2, C 14·8, *a* 5·1, *b* 5·1, *c* 4·6,
 D 15·1, E 7·1, F 5·9, *a* 5, *b* 5·2, *c* 4·4, G 5·4, *a* 4·7, *b* 4·8,
c 4·1, H 4·5, I 5·1, J 82, K 77.
 Extremes, A 76–85·5, J 77–87, K 68–82; 3 of the 4 brachycephalic.
Females, 11 most perfect, A 69·4, B 20·2, C 14·4, *a* 4·8, *b* 4·9,
c 4·5, D 14, E 7·1, F 5·4, *a* 4·6, *b* 5, *c* 4·3, G 5·2, *a* 4·4, *b* 4·6,
c 4·1, H 4·6, I 4·9, J 7·6, K 73.
 7 others, B 20·1, C 14·2, *a* 4·8, *b* 4·9, *c* 4·5, D 13·9, E 7, F 5·4,
a 4·6, *b* 4·9, *c* 4·3, G 5·2, *a* 4·5, *b* 4·6, *c* 3·9, I 4·8, J 7·7, K 74.
 Extremes, A 60–88, J 72–88, K 68–78; 3 of the 18 brachycephalic.
 Averages of the whole series of 39 English skulls, ♂ and ♀,
 A 74·8, B 20·6, C 14·4, *a* 5, *b* 5, *c* 4·5, D 14·4, E 7·2, F 5·5,
a 4·7, *b* 5, *c* 4·3, G 5·3, *a* 4·5, *b* 4·7, *c* 4·1, H 4·7, I 5·2, J 7·6,
 K 73.

2. *Welsh.*

1. 337. Welsh. "R——P——, died June 29, 1805, aged 35."
 A 83, B 21·8, C 15·7, *a* 5·3, *b* 5·7, *c* 4·7, D 15·1, E 7·6, F 5·8 *t*,
a 5, *b* 5·2, *c* 4·3, G 5·8, *a* 4·9, *b* 5, *c* 4·3, H 5·3, I 5·1, J 7·6,
 K 76.

A large dolichocephalic skull, slightly awry, with a long face.
 It retains the frontal suture and has a triquetral bone on each
 side, occupying a great part of the scaly portion of the occipital.
 From the churchyard of Wrexham, Denbighshire.
 Presented by E. WILLIAMS, M.D., 1856.

2. 912. Welsh. "OWEN." ♂, æt. c. 40. D.C.

A 73, B 20·7, C 15·1, *a* 5, *b* 5·4, *c* 4·7, D 13·6, E 7·5, F 5·3, *a* 4·4, *b* 4·8, *c* 4·4, G 5·4, *a* 4·4, *b* 4·7, *c* 4·3, H 4·8, I 4·9, J 7·0, K 7·3.

A long, low, and narrow eylindroecephalic skull, which owes its form and dimensions to *synostosis*. The sagittal suture, all the middle portions of the lambdoid and of the coronal, and the spheno-frontal and spheno-parietal sutures, on both sides, are almost entirely effaced by premature ossification. The semi-circular lines, marking the attachment of the temporal muscles, ascend on the parietals to within 2·8 inches of each other. It greatly resembles, except in size, the cranium of the convict executed on Norfolk Island, No. 387, and also No. 1016, and belonged to a man who was hanged for homicide¹.

From the Collection of JOSHUA BROOKES, and inscribed in his autograph, "OWEN, an assassin."

3. Scottish.

1. 121. Scottish. "JANE THOMPSON," æt. e. 40.

A 75·5, B 21·2, C 15·3, *a* 5·1, *b* 5·5, *c* 4·7, D 14·5, E 7·5, F 5·7_p, *a* 4·6, *b* 5·3, *c* 4·4, G 5·1, *a* 4·6, *b* 4·6, *c* 4·2, H 4·2, I 5·1, J 7·6, K 6·8.

The nasal bones are irregular and unequally developed, the left being the larger; consequently the nose and nasal orifice are awry, and both directed to the right side.

2. 164. Scottish. "DOULL," *Caithness*. ♂, æt. c. 35. Calv.

A 78, B 21, C 15·2, *a* 5·1, *b* 4·8, *c* 5·3, D 15, E 7·4, F 5·5_p, *a* 4·6, *b* 4·8, *c* 4·4, G 5·4, *a* 4·6, *b* 4·8, *c* 4·5, J 7·4, K 7·3.

A dolichoecephalic calvarium of a *Caithness* man, said to be of Norse extraction.

3. 165. Scottish. "ALEXANDER JACK," *Caithness*, æt. c. 70. Calv.

A 78·5, B 21·4, C 15·5, D 15, E 7·3, F 5·7_t, *a* 5·1, *b* 5, *c* 5, G 5·3, *a* 4·9, *b* 4·9, *c* 4·4, I 5, J 7·8, K 7·2.

A shorter, broad, oblong, platycephalic calvarium of an old man, of Norse blood, from the extreme north of *Caithness*. It presents a slight indication of annular deformation.

Nos. 164 and 165 presented by Mr. A. HENRY RHIND, F.S.A.L. & S.

¹ *On Synostotic Crania among Aboriginal Races of Man*. By J. BARNARD DAVIS, M.D., 1865. Haarlem, 4to, p. 21.

4. 193*. Scottish. "ROBERT BRUCE." Interred 1329, reinterred 1819.

B 21·8, D 15·5, E 7·5, F 6·1 *t*, *a* 4·9, *b* 5·5, *c* 4·4, H 5·3, I 6, J 81.

A large brachycephalic skull of a man of more than middle life, with a long, broad face and recedent forehead.

Taken from the cranium of ROBERT BRUCE, "Rex Scotorum," when disinterred, at Dunfermline, in 1819.

5. 286. Scottish. *Highlander*, æt. 43. Native of Islc of Lewis.
A 78, B 20·3, C 14·6, *a* 4·9, *b* 5·3, *c* 4·4, D 15·2, E 7, F 5·5, *a* 4·5,
b 5·3, *c* 4·4, G 6, *a* 4·8, *b* 4·9, *c* 4·2, H 5·1, I 5, J 78, K 85.

A somewhat dolichocephalic skull of a Highlander, with a long and rather prognathous face; distinguished by the tallness of the calvarium. Has a Wormian ossicle in each sphenoparietal suture.

6. 287. Scottish. ♂, æt. c. 30. Native of Parish of Wick, Caithness.

A 78·5, B 21·1, C 15·1, *a* 5·5, *b* 5·1, *c* 4·5, D 15·4, E 7·2, F 6 *p*,
a 5·1, *b* 5·4, *c* 4·4, G 5·5, *a* 5, *b* 5·1, *c* 4·2, H 5, I 5·4, J 83,
K 76.

A well-formed brachycephalic skull of an intelligent farmer, who had brown hair, a long face and nose, and a pointed chin.

7. 288. Scottish. ♂, æt. c. 35. Native of Parish of Canisbay, Caithness.

A 75·5, B 20·8, C 14·8, *a* 5·2, *b* 5, *c* 4·6, D 14·5, E 7·4, F 5·6 *t*,
a 4·7, *b* 5·3, *c* 4·4, G 5·3, *a* 4·7, *b* 4·7, *c* 4·2, H 4·9, I 5, J 76,
K 71.

A beautiful skull of a man who had brown hair and a long slender face.

8. 289. Scottish. ♀, æt. c. 16. Native of Wick, Caithness. Calv.

A 66, B 19·2, C 14·2, *a* 5, *b* 4·7, *c* 4·5, D 14, E 6·7, F 5·1, *a* 4·5,
b 5, *c* 4, G 5·6, *a* 4·6, *b* 4·7, *c* 4, I 4·7, J 76, K 83.

A tall dolichocephalic calvarium of a girl. Frontal suture present, but nearly half an inch to the right of the sagittal. Presents on the left side, immediately before the *foramen magnum*, one of the *processus papillares* of Prof. H. J. HALBERTSMA.

9. 290. Scottish. ♂, æt. c. 40. Imperf. calv.
B 21·3, C 15, *a* 5·1, *b* 5·1, *c* 4·8, D 15·2, E 7·2, F 6 *p*, *a* 5·3, *b* 5·1,
c 4·5, G 5, *a* 4·8, *b* 4·9, *c* 3·9, J 83, K 70.

A platybrachycephalic calvarium.

10. 291. Scottish. ♂, æt. c. 50. Imperf. calv.

B 20·8, C 14·6, *a* 5, *b* 4·5, *c* 5·1, D 15·9, E 6·8, F 6·4*p*, *a* 5, *b* 5·5, *c* 4·7, G 5·3, *a* 4·8, *b* 5, *c* 4·4, J ·94, K ·78.

A remarkable brachycephalic, globular calvarium.

Nos. 290 and 291 were discovered, in 1855, accidentally in a spot in Caithness, near to John O'Groat's, not a cemetery, but where as many bodies had been buried.

Nos. 286 to 291 presented by Mr. A. HENRY RHIND, F.S.A.L. & S.

11. 566*. Scottish. ♂, of middle age.

B 22, C 17, *a* 5·5, *b* 6, *c* 5·5, D 14·1, E 8·2, F 4·9*t*, *a* 4·7, *b* 4·2, *c* 3·9, G 5·7, *a* 5, *b* 4·9, *c* 4·4, H 4·4, I 5, J ·58, K ·69.

A synostotic *scaphocephalic* skull, remarkable for its lofty square forehead, prominent frontal protuberances, narrowness in the parietal and occipital regions, ridge-like elevation of the sagittal, and globular appendicular projection of the occiput. Its tallness, narrowness, and length are apparent in the measurements, its height greatly exceeding its width. There is no trace of sagittal suture. This is a strongly marked example of *scaphocephalism*. Its history is unknown. It is labelled "Celtic" in the museum of Prof. ALLEN THOMSON¹. See No. 69, p. 37.

Presented by Prof. A. THOMSON, M.D., F.R.S.L. & E.

12. 999. Scottish. "ALEXANDER PEIRCE." ♂, æt. 50. Calv. D.C.

A 74, B 20·7, C 14·8, *a* 5, *b* 5·4, *c* 4·4, D 14·8, E 7·1, F 5·6*t*, *a* 4·9, *b* 5, *c* 4·3, G 5·3, *a* 4·6, *b* 4·6, *c* 4·2, I 5·3, J ·78, K ·74.

In DEVILLE's *Catalogue* described, "Skull of ALEXANDER PEIRCE, a bushranger and most extraordinary character (see long account of him by J. SCOTT, Colonial Surgeon)." The calvarium itself is inscribed in Mr. Scott's handwriting, "The skull of ALEX. PEIRCE. J. SCOTT."

Although the teeth and alveoli have almost wholly perished, all the sutures are in an open state, even the frontal, except about an inch of the coronal on the right side, which is ossified. The spheno-parietal sutures are extremely short.

This calvarium, as the measurement G *b* 4·6 shows, exhibits the same lowness of the region of the middle cranial vertebra which distinguishes the cast of the infamous poisoner, "WILLIAM PALMER." In the cranioscopic system of Professor C. G. CARUS this is regarded as covering the seat of the feelings, or sentiments. *Neuer Atlas der Cranioscopie*, Leipzig, 1864, fol., where a figure from the plaster-cast of PALMER is given. Tafel xxi.

¹ This is the cranium alluded to by Dr. W. TURNER in his memoir *On Cranial Deformities*, N. Hist. Rev. 1864, p. 99, note.

It is remarkable that the Mortonian Collection should contain the skull of another bushranger named PIERCE, who is said to have been executed in New South Wales, probably in Van Diemen's Land. MEIGS's *Catalogue*, p. 25.

13. 1311. Scottish Highlander. ♂, æt. e. 30. V.L. d. J.
A 71, B 19·7, C 13·7, *a* 4·8, *b* 4·4, *c* 4·5, D 14·3, E 6·8, F 5·5 *p*,
a 4·6, *b* 5, *c* 4·1, G 5·2, *a* 4·5, *b* 4·5, *c* 3·8, H 4·5, I 5·3, J 80,
K 76.

Presents premature ossification of nearly the whole of the left half of the lambdoidal suture and of the posterior part of the sagittal.

Soldier, killed at the battle of Waterloo.

Reference.—BLUMENBACH, *Dec. Cran.*, Tab. lxvi. "Ex insula Egg."

Averages of Six Caithness Men.

A 77·6, B 21, C 15, *a* 5·1, *b* 4·9, *c* 4·8, D 5·1, E 7·2, F 5·8, *a* 5,
b 5·2, *c* 4·5, G 5·3, *a* 4·8, *b* 4·9, *c* 4·2, H 4·9, I 5, J 81, K 73.
Extremes, A 75·5–78·5, J 74–94, K 70–78; 3 of the 6 brachycephalie.

4. Irish.

1. 176*. Irish? ♂, æt. e. 60.

A 79·3, B 21·7, C 15·7, *a* 5·6, *b* 5·4, *c* 4·7, D 16, E 7·5, F 6·3 *t*,
a 5·2, *b* 5·4, *c* 4·3, G 5·7, H 5·5, I 5·5, J 84, K 76.

This large brachycephalie skull was found at a depth of seven feet, within the Round Tower of Drumbo, co. Down. The skeleton lay east and west, with the head to the west; sufficient Christian evidence, whatever may be written of these singular structures. From the place of its discovery we have put it at the head of our Irish series, but we are persuaded that it is not the skull of an Irishman. It has doubtless belonged to an ecclesiastic, and one foreign to the soil of Hibernia.

Presented by Mr. JNO. GRATTAN, Belfast. This gentleman has figured the Drumbo skull in the *Ulster Journ. of Archæol.*, and given measurements of it, vol. iv. p. 221.

2. 202. Irish. ♀, æt. e. 17. Calv.

A 72·5, B 20·3, C 14·8, *a* 5·2, *b* 4·9, *c* 4·7, D 14·5, E 7·2, F 5·5 *p*,
a 4·8, *b* 4·9, *c* 4·4, G 5·5, *a* 4·8, *b* 4·8, *c* 4, I 4·6, J 76, K 76.

Has short broad nasal bones and a nasal orifice closely resembling No. 479.

3. 203. Irish. ♀, æt. c. 80. Calv.

A 64, B 19·4, C 13·9, *a* 4·7, *b* 4·6, *c* 4·6, D 13·8, E 6·7, F 5·5 *p*,
a 4·5, *b* 5, *c* 3·8, G 5, *a* 4·1, *b* 4·2, *c* 4·1, I 4·6, J 82, K 74.

4. 204. Irish. ♀, æt. c. 22. Calv.

A 65, B 19·5, C 14·3, *a* 5·1, *b* 4·9, *c* 4·3, D 13·3, E 7, F 5·2 *t*, *a* 4·5,
b 4·2, *c* 3·9, G 5·1, *a* 4·5, *b* 4·5, *c* 3·9, I 4·7, J 74, K 71.

Has a frontal suture.

These two small calvaria of women, one brachycephalic and very old, the other dolichocephalic and young, were derived from a cemetery in the island of Omey, co. Galway. This small island contains four ancient cemeteries. In that from which they were obtained none but women are interred¹.

Nos. 202 to 205 presented by W. H. SUFFIELD, M.D., 1854.

5. 205. Irish. ♀, æt. c. 7. Imperf. calv.

Nos. 202 and 205 from graveyard near Roundstone, co. Galway.

6. 206. Irish. ♂, æt. c. 35. Calv.

A 100, B 22·5, C 16·1, *a* 5·7, *b* 5·4, *c* 5, D 15·4, E 7·8, F 6 *p*, *a* 5·2,
b 5·5, *c* 4·9, G 5·1, *a* 4·9, *b* 5, *c* 4·5, I 5·4, J 77, K 65.

A megalcephalic platycephalic calvarium, affected with *plastic deformation*, by which the parts of the occipital surrounding the foramen have been depressed, and the temporal regions bulged out. It has a small paramastoid process on the right side. On the opposite side the transverse process of the atlas has had a slight articular connexion with the occipital².

7. 207. Irish. ♀, æt. c. 25. Calv.

A 72, B 20·3, C 14·8, *a* 5, *b* 5·5, *c* 4·3, D 14·2, E 7·2, F 5·3, *a* 4·4,
b 4·8, *c* 4·3, G 5·2, *a* 4·4, *b* 4·6, *c* 4·2, I 4·9, J 73, K 72.

An unusually heavy dolichocephalic calvarium of a young woman.

¹ In the minds of the Irish peasantry, so earnestly devoted to mysterious fancy, there is a legend connected with this place of burial. It is told that a dying widower, on one occasion, besought his friends to carry his body and lay it by the side of his wife, in this spot. The tradition has it that next morning the corpse in its coffin was found on the surface of the earth. The sorrowing friends buried the body a second time; again the following morning it was found to be disinterred. It was a third time inhumed, and a third time ejected; after which they decided to contend no more with the hidden powers, but carried it to another burial-place. This version was derived from an old woman who dwelt hard by; and, it is needless to say to those acquainted with the Irish peasantry, she gave it in an undoubting spirit.

² It is remarkable that another megalcephalic calvarium, in the Bateman Museum, is also that of an Irishman. It is the relic of a man of about 40 years of age, and was found in Suffolk Street, Dublin, in 1855, at a depth of 10 feet. It exceeds in magnitude No. 206, A being 102·2.

Nos. 206 and 207 were obtained from the burial-place near the ruins of the Dominican Abbey at Athenry, co. Galway¹.

Presented by Charles Croker KING, M.D., Professor of Anatomy, Galway.

8. 821. Irish. *Sligo*. ♂, c. 30.

A 78, B 21·4, C 15·7, *a* 5·4, *b* 5·5, *c* 4·8, D 14·7, E 7·5, F 5·5 *t*,
a 4·9, *b* 5·3, *c* 4·5, G 5·7, *a* 4·5, *b* 4·8, *c* 4·3, H 5·2, I 5·3,
J 7·3, K 7·6.

A rather narrow dolichocephalic skull, with long face and nose, from Sligo Abbey, 1861.

9. 822. Irish. ♂, æt. e. 30. Calv.

A 73, B 20·9, C 15·2, *a* 5·1, *b* 5·2, *c* 4·9, D 14·5, E 7·4, F 5·6 *t*,
a 4·7, *b* 4·7, *c* 4·3, G 5·4, *a* 4·6, *b* 4·7, *c* 4, I 5·3, J 7·5, K 7·3.

10. 823. Irish. ♂. Imperf. calv.

B 21·2, C *a* 5·2, *b* 5, D 14·9, E 7·6, F 5·7 *p*, *a* 4·6, *b* 5·6, *c* 4·3,
G *a* 4·6, *b* 4·9, *c* 4·2, J 7·5.

11. 824. Irish. ♀. Imperf. calv.

B 20·4, C 14·5, *a* 5·1 *b* 5, *c* 4·4, E 7·3.

12. 825. Irish. ♂, of considerable age. Imperf. calv.

B 20·6, D 14·6, E 7·5, F 5·4, *a* 4·5, *b* 5, *c* 4·1, G *a* 4·8, *b* 5, *c* 4·3,
J 7·2.

13. 826. Irish. ♂. Imperf. calv.

B 21·2, C 15·6, *a* 5·2, E 7·6, F 5·6 *t*, *a* 4·6, *b* 5·1, *c* 4·1, G 5·1,
J 7·3, K 6·7.

Has some elaborate triquetral bones in the central portion of the lambdoidal suture, and a very prominent supraoccipital region.

14. 827. Irish. ♂, of advanced age. Imperf. calv.

B 21·4, C 15, *a* 5·1, *b* 5·4, *c* 4·5, D 15, E 7·6, F 5·9 *p*, *a* 4·8, *b* 5·1,
c 4·5, G 5·3, *a* 4·7, *b* 4·9, *c* 4·2, J 7·7, K 6·9.

15. 828. Irish. ♂. Imperf. calv.

B 21·8, C 15·6, *a* 5·3, *b* 5·2, *c* 5·1, D 14·4, E 7·8, F 5·7 *t*, *a* 5, *b* 5·1,
c 4·3, G 5·1, J 7·3, K 6·5.

The supraoccipital region projects considerably, like an appendage to the parietals.

Nos. 822 to 828 from Moyne Abbey, co. Mayo, 1861.

¹ In Ireland, the land of ruins *par excellence*, it is the daily practice to inter the dead with every concomitant pomp, even to costly and elaborate monuments, amid the utmost dilapidation, decay, and ruin.

16. 829. Irish. *Mayo*. ♂, æt. e. 70. Calv.

A 74, B 20·6, C 15, *a* 5, *b* 5·2, *c* 4·8, D 14·3, E 7·4, F 5·4 *t*, *a* 4·4, *b* 5, *c* 4·3, G 5·3, *a* 4·6, *b* 4·8, *c* 4·6, J 73, K 71.

17. 830. Irish. ♀, æt. e. 8. Calv.

A 64.

18. 831. Irish. ♀, æt. e. 80. Calv.

A 68·5, B 19·9, C 14·6, *a* 4·8, *b* 5·2, *c* 4·6, D 14·2, E 7·1, F 5·4 *t*, *a* 4·4, *b* 4·8, *c* 4·2, G 5·4, *a* 4·4, *b* 4·6, *c* 4, I 5·1, J 76, K 76.

19. 832. Irish. *Mayo*. ♂, æt. e. 80. Calv.

A 84·5, B 21·4, C 14·8, *a* 5·2, *b* 5·3, *c* 4·3, D 15·2, E 7·5, F 5·8 *p*, *a* 4·8, *b* 5·1, *c* 4·2, G 5·3, *a* 4·9, *b* 5, *c* 4, I 5·6, J 77, K 70.

This calvarium exhibits indications of artificial deformation in a slightly concave depression running across the fore part of the parietals. It is that distortion so well described by FOVILLE (*Déform. du Crâne résultant de la méthode de couvrir la tête des enfans*: 1834), and denominated by Dr. L. A. GOSSE *Tête annulaire*. See also Nos. 1108 and 1115.

20. 833. Irish. ♀, æt. e. 19. Calv.

A 77·5, B 20·4, C 15·2, *a* 5·2, *b* 5·2, *c* 4·8, D 14·6, E 7·2, F 5·6 *p*, *a* 4·6, *b* 5, *c* 4·3, G 5·2, *a* 4·7, *b* 4·9, *c* 4·5, I 4·9, J 77, K 72.

There is complete premature synostosis of the sagittal suture, without seaphoecephalism, but with a slight want of fulness in the vertical region.

21. 834. Irish. ♂, æt. e. 90. Imperf. calv.

B 21, C 15·1, *b* 5·1, D 14·8, E 7·4, F 5·7 *t*, *a* 4·7, *b* 4·8, *c* 4·4, G 5·5, *a* 4·7, *b* 5, *c* 4·4, I 5·3, J 77, K 74.

A fine, large, regular calvarium of a very old man, which presents two or three small exostoses in the frontal region.

Nos. 829 to 834 derived from Temple Mary Abbey, co. Mayo, 1861.

22. 835. Irish. ♀. Imperf. calv.

A 62, B 20·1, C 14, *a* 5, *b* 4·6, *c* 4·1, D 14·3, E 7·1, F 5·6 *p*, *a* 4·5, *b* 5·3, *c* 4·6, G 5, *a* 4·4, *b* 4·6, *c* 4·2, J 79, K 70.

From Mueros Abbey, co. Kerry, 1861.

23. 842. Irish. ♀, æt. e. 30. Imperf. calv.

C 14, *a* 4·8, *b* 4·9, *c* 4·3, E 7·1, F 5·5 *p*, *a* 4·7, *b* 4·9, *c* 4·4, G 4·9, J 77, K 69.

Has a frontal suture.

From Teampull Brecain, Aara Mor, or Great Aran Isle.

24. 843. Irish. ♂, of advanced age. Imperf. calv.
A 63·5, B 20·7, C 15, D 15, E 7·4, F 5·5 *p*, *a* 4·6, *b* 5·2, *c* 4·3,
G 5·1, *a* 4·6, *b* 4·8, *c* 4·3, J 7·4, K 69.

The sutures are almost wholly obliterated in this heavy calvarium.

From Killcany or St. Ency's Church, Aranmore.

These graveyards of the Aran Isles are regarded by Sir W. R. WILDE, the distinguished Irish antiquary, as "very early," and the crania derived from them "as very ancient skulls." Some account of the islets and their antiquities may be found in Mr. M. HAVERTY's *The Aran Isles: a Report of the Excursion of the Ethnol. Sect. of the Brit. Assoc. Sept. 1857: 1859.*

Nos. 842 and 843 presented by John BEDDOE, M.D., 1861.

25. 914. Irish. ♀, æt. c. 45. Calv. D.C.
A 66·5, B 20·1, C 14·7, *a* 5·1, *b* 4·9, *c* 4·7, D 14·4, E 7·1, F 5·3 *p*,
a 4·6, *b* 5·1, *c* 4·2, G 5·4, *a* 4·5, *b* 4·6, *c* 4·2, I 5·2, J 7·4, K 76.

This small calvarium of a woman, with a flat dome, is affected with *hyperostosis* and is thick and dense. There are small ossific nodules spread over the frontal and parietal bones. The sutures are still unclosed.

It is derived from the Abbey of Holy Cross, co. Tipperary, and is inscribed in the autograph of BROOKES, from whose collection it came, "One of the Kings of Munster. Presented by Bernard LAMBERT, Esq., 16th June, 1824." A letter to the latter gentleman accompanied it, written by his brother, Lewis John LAMBERT, of Farney Castle, dated June 4th, 1824, which gives its history as far as it was known. The whole story deserves a place among the Irish bulls.

26. 952. Irish. ♀, æt. c. 80. Calv. D.C.
A 66, B 20·4, C 14·3, *a* 4·8, *b* 4·9, *c* 4·6, D 13·6, E 7·2, F 5·4 *p*,
a 4·4, *b* 4·6, *c* 4·3, G 5·2, *a* 4·5, *b* 4·5, *c* 4, I 4·8, J 7·5, K 72.

A small, low, long calvarium, affected with caries on the forehead, and having an exostosis on the right alveolus, opposite the middle molar.

Presented to DEVILLE by Dr. EVANSON.

27. 1025. Irish. ♀, æt. c. 60. Calv. D.C.
E 6·4, F 4·9, G 4·5.

The calvarium of a woman found in a peat-bog, co. Wicklow, It is greatly shrunk and entirely converted into leather. See No. 680, *suprà*, p. 4.

28. 1096. Irish. ♂, æt. c. 60. Calv.
A 79, B 21·4, C 14·6, *a* 4·9, *b* 5, *c* 4·7, D 14·5, E 7·4, F 6 *t*, *a* 5,
b 4·9, *c* 4·8, G 5·2, *a* 4·6, *b* 4·7, *c* 4·1, I 5·5, J 8·1, K 67.

A platycephalic broad calvarium, which is probably affected with plastic deformation.

29. 1097. Irish. *Kerry*. ♂, æt. c. 22. Calv.

A 89, B 22·8, C 15·4, *a* 5·5, *b* 4·8, *c* 5·1, D 15·3, E 7·6, F 5·8 *t*,
a 5, *b* 5·1, *c* 5, G 5·5, *a* 4·9, *b* 5, *c* 4·1, I 5·3, J 7·6, K 7·2.

30. 1098. Irish. ♀, æt. c. 35. Calv.

A 72, B 20·2, C 14·2, *a* 4·8, *b* 5·1, *c* 4·3, D 14·1, E 7·1, F 5·4 *p*,
a 4·6, *b* 5·3, *c* 4·2, G 5·3, *a* 4·5, *b* 4·5, *c* 3·9, I 5, J 7·6, K 7·4.

31. 1099. Irish. ♂, æt. c. 40. Calv.

A 73, B 21·1, C 14·7, *a* 4·9, *b* 5·1, *c* 4·7, D 14·3, E 7·5, F 5·4 *t*,
a 4·7, *b* 5, *c* 4·4, G 5·1, *a* 4·5, *b* 4·7, *c* 4·4, J 7·2, K 6·8.

32. 1100. Irish. ♀, æt. c. 35. Calv.

A 81, B 20·7, C *a* 5·4, *b* 4·4, D 14·4, E 7·2, F 5·7 *t*, *a* 4·8, *b* 5·1,
c 4·4, G 5·2, *a* 4·7, *b* 4·7, *c* 4·2, I 5·2, J 7·9, K 7·2.

33. 1101. Irish. ♀, æt. c. 30. Calv.

A 79, B 20·5, C 14·5, *a* 5·1, *b* 4·9, *c* 4·5, D 14·7, E 7·2, F 5·1 *p*,
a 4·8, *b* 4·6, *c* 4·4, G 5·3, *a* 4·5, *b* 4·7, *c* 4, I 4·9, J 7·1, K 7·3.

34. 1102. Irish. ♀. Imperf. calv.

A 75, B 20·8, C 14·7, *a* 5, *b* 5·1, *c* 4·6, D 14·3, E 7·3, F 5·8 *p*, *a* 4·8,
b 5, *c* 4·2, G 5·1, *a* 4·5, *b* 4·7, *c* 3·9, J 7·9, K 6·9.

Nos. 1096 to 1102 from the burial-ground of the ruined church of Kilmelkedor, Kerry, 1862.

35. 1103. Irish. *Kerry*. ♂, æt. c. 50.

A 80·5, B 21·2, C 15·2, *a* 5, *b* 5·4, *c* 4·8, D 15·2, E 7·4, F 5·7 *p*,
a 4·9, *b* 5·4, *c* 4·5, G 5·5, *a* 4·5, *b* 4·8, *c* 4·3, H 5, I 5·3, J 7·7,
K 7·4.

Has an exostosis on the outside of the right upper alveolus. The outer incisor and canine, both upper and lower, on both sides are worn into notches by the constant friction of the pipe.

36. 1104. Irish. ♀, æt. c. 45. Calv.

A 71·5, B 20·2, C 14·2, *a* 5, *b* 4·7, *c* 4·5, D 14·1, E 7·1, F 5·6 *p*,
a 4·6, *b* 5·1, *c* 4·2, G 5·2, *a* 4·5, *b* 4·5, *c* 3·9, I 5, J 7·9, K 7·3.

37. 1105. Irish. ♀, æt. c. 18.

A 82·5, B 21·1, C 15, *a* 5, *b* 5·1, *c* 4·9, D 14·4, E 7·4, F 5·6 *p*,
a 5·1, *b* 5·1, *c* 4·3, G 5·2, *a* 4·5, *b* 4·7, *c* 4·2, H 4·4, I 4·9,
J 7·5, K 7·0.

A skull of elegant form.

38. 1106. Irish. *Kerry*. ♂, æt. c. 70.

A 84, B 21·1, C 15·1, *a* 5, *b* 5·1, *c* 4·9, D 14·7, E 7·4, F 5·8*p*, *a* 4·7, *b* 5·3, *c* 4·2, G 5·3, *a* 4·5, *b* 4·8, *c* 4·3, H 5·1, J 78, K 71.

39. 1107. Irish. ♀, æt. c. 30. Calv.

A 72, B 20·2, C 13·8, *a* 4·9, *b* 4·2, *c* 4·7, D 14·1, E 7·1, F 5·1*p*, *a* 4·7, *b* 4·8, *c* 4·3, G 5·2, *a* 4·5, *b* 4·5, *c* 4, I 5·2, J 72, K 73.

Nos. 1103 to 1107 from the ruined abbey of Kilcolman, Kerry, 1862.

An examination of these modern Irish erania is decisive as to the dolichocephalie character of the Irish skull, there being only one definitely belonging to the opposite category. RETZIUS has already placed the Celtic Irish among his "European dolichocephali," *Blick på Ethnologiens närvarande Ståndpunkt*, 1857, S. 4. Some skulls of ancient Hibernians were brachycephalic, *Cran. Brit.* Pl. 55. Another brachycephalie example is figured in WILDE's *Lect. on the Ethnol. of the Anc. Irish*, 1844, p. 12: the lower jaw in this cut does not belong to the calvarium. The three works here quoted are the only authorities we are acquainted with upon Irish craniology, except the brief enumerations given in the Catalogues. MEIGS's *Cat.* p. 26; V. d. HOEVEN's *Cat.* p. 16.

The most distinct features in the physiognomy of the western Irish are seen to be derived from the cranial conformation—the strongly marked superciliary ridges, extending across the nose, making a horizontal line, upon which the eyebrows are placed, and overhanging the eyes and face—the low forehead, receding both laterally and posteriorly, particularly striking in the women. The calvarium, rather capacious in the middle and occipital regions, is of only moderate breadth, without being high, and is not short. The nasal bones much more frequently support a long and prominent nose, especially so at the tip, than the *nez retroussé*. A strongly prognathous countenance occurs at times.

Averages of Measurements of Irish Skulls.

Males, 10 tolerably perfect, A 79·4, B 21·3, C 15·1, *a* 5·1, *b* 5·4, *c* 4·7, D 14·8, E 7·4, F 5·6, *a* 4·8, *b* 5·1, *c* 4·5, G 5·3, *a* 4·6, *b* 4·8, *c* 4·2, J 76, K 71.

16 perfect and less perfect, A 77·8, B 21·2, C 15·1, *a* 5·1, *b* 5·2, *c* 4·8, D 14·8, E 7·5, F 5·6, *a* 4·7, *b* 5·1, *c* 4·4, G 5·2, *a* 4·6, *b* 4·8, *c* 4·2, H 5·1, I 5·4, J 75, K 70.

Extremes, A 73–89, J 72–81, K 65–76.

Females, 15 perfect, A 71, B 20·1, C 14·5, *a* 5, *b* 4·9, *c* 4·5, D 14·2, E 7·1, F 5·4, *a* 4·6, *b* 4·8, *c* 4·2, G 5·2, *a* 4·5, *b* 4·6, *c* 4, I 4·9, J 76, K 73.

Extremes, A 64-82·5, J 71-82, K 69-76; 1 out of 17 brachycephalie.

31 ♂ and ♀, A 74, B 20·6, C 14·8, *a* 5, *b* 5, *c* 4·6, D 14·5, E 7·3, F 5·4, *a* 4·6, *b* 4·9, *c* 4·3, G 5·2, *a* 4·5, *b* 4·7, *c* 4·1, H 5·1, I 5·1, J 74, K 71.

Reference.—John GRATTAN, *Seven Lithographic Plates*, 4to, of skulls chiefly derived from the foundations of the Round Towers of Ulster, Ireland. Priv. print. See *Ulster Journ. Archaeol.*

B. RACES OF FRANCE.

a. ANCIENT RACES.

1. Gaulish.

i. 105*. Ancient Gaul. ♀. Imperf. calv.

B 20·7, C 15·1, D 15, E 7·4, F 5·7*p*, *a* 4·6, *b* 5·7, *c* 4·3, G 5·5, J 77, K 74.

A long calvarium, distinguished by the prominence of the parietal protuberances—its widest point—and for its good size, being that of a woman. Forehead narrow, but rather elevated.

From the chambered tumulus of Fontenay-le-Marmion, Calvados (region of VIDUEASSES), *Mém. de la Soc. des Antiq. de Normandie*, 1831, 32, and 33. This very large long-galleried tumulus of the ancient Gauls was discovered in 1829. In it were found urns, indications of cremation, and a fine stone celt. Presented by Prof. A. CHARMA, Caen.

2. 558*. Ancient Gaul. ♂, æt. e. 40.

A 77·4, B 20·8, C 15·1, *a* 5·1, *b* 5·2, *c* 4·8, D 16, E 7, F 6*t*, *a* 4·9, *b* 5·5, *c* 4·6, G 5·9, *a* 5·2, *b* 5, *c* 3·9, H 4·9, I 5·6, J 85, K 84.

A remarkable brachycephalie cranium. The surface of the posterior portions of the parietals and of the supraoccipital region is occupied by a large flat plane, having an area of about four inches in each diameter. This is the *parieto-occipital* flatness so often described in the *Crania Britannica*¹. None of

¹ Description of Green Lowe Cranium, Pl. 41. p. (2).

The women of the ancient Britons, Caledonians, and ancient Gauls may probably have placed their infants on nursing-boards, or wooden cradles, in the manner of the North-American Indians. (MORTON, *Cran. Amer.* p. 203; SCHOOLCRAFT, *Indian Tribes*, ii. 66.) To these they would be fixed, so as to prevent motion of the head and keep it secure in one position, for the first year of infantile life. I am not aware that any of the ancient writers allude to such a practice; yet the study of the crania of these people gives some probability to their having followed it.

Note on the Distortions which present themselves in the Crania of the Anc. Britons, by J. BARNARD DAVIS, *Nat. Hist. Rev.* 1862, p. 290; at p. 297, fig. 2, is a figure of this cranium from the Meudon dolmen.

the skulls depicted in that work exhibit this flatness more markedly than this. I have no doubt that this flat plane is not a natural feature, but that it has been produced during the

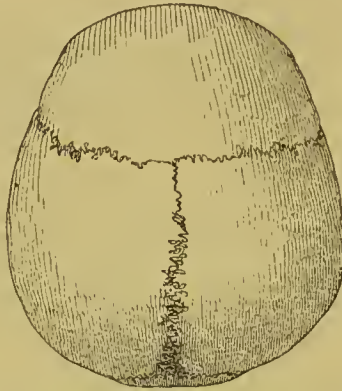


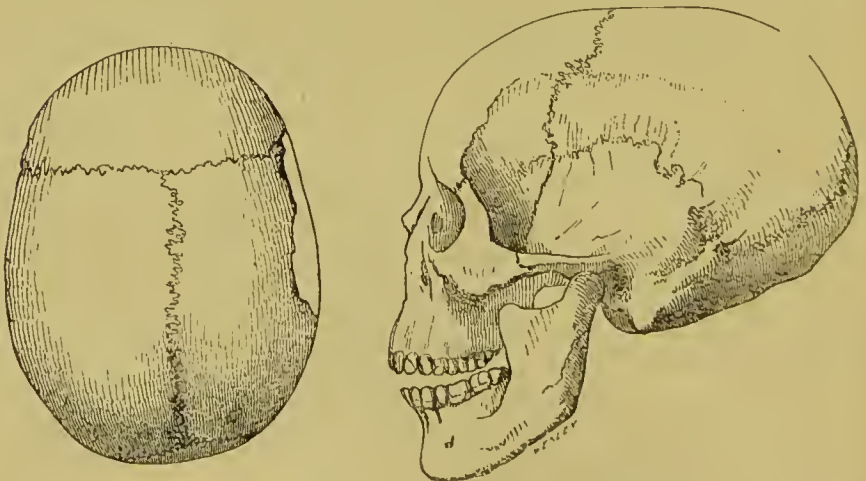
Fig. 60.—*Cranium of Ancient Gaul, Meudon Dolmen.*—No. 558*.—*Quarter-size.*

tender period of infancy, probably without design, by the position to which the child has been restricted upon the hard substance that has served for a pillow.

3. 559*. Ancient Gaul. ♀. Imperf. cran.

B 20·5, C 14·5, *a* 5, *b* 4·8, *c* 4·7, D 14·1, E 7·2, F 5·4_p, *a* 4·5, *c* 3·9, G 5·5, *a* 4·5, *b* 4·9, *c* 4·3, H 4·9, I 5, J 7·5, K 7·6.

The dolichocephalic skull of a woman.



Figs. 61 & 62.—*Cranium of Ancient Gaul, Meudon Dolmen.*—No. 559*.—*Quarter-size.*

Nos. 558* and 559* are derived from the dolmen discovered at Mendon, Seine et Oise (region of the PARISII), July 1845¹.

From L. Eugène ROBERT, M.D.P.

4. 1207*. Ancient Gaul. ♀, æt. e. 45. (No. 4.) Calv.

A 63·5, B 19·4, C 13·7, a 4·9, b 4·8, c 4, D 14·2, E 6·6, F 5·3p,
a 4·5, b 5, c 4·2, G 5·1, a 4·3, b 4·5, c 3·8, I 4·9, J ·80, K ·77.

Retains its frontal suture.

5. 1208*. Ancient Gaul. ♂, æt. e. 40. (No. 8.) Imperf. calv.

A 85·3, B 21·2, C 15·2, a 5·5, b 5·2, c 4·5, D 15·7, E 7·2, F 6p,
a 4·8, b 5·6, c 4·6, G 5·6, a 5, b 5·3, c 4·5, J ·83, K ·77.

A large brachycephalic calvarium, narrow in the frontal region and very wide in the interparietal. Has a remarkable resemblance to 105*.

6. 1209*. Ancient Gaul. ♂, æt. e. 50. (No. 11.) Calv.

A 73·2, B 20, C 14·5, a 4·9, b 5, c 4·6, D 15·3, E 6·7, F 5·8p,
a 4·8, b 5·3, c 4·5, G 5·6, a 4·8, b 4·9, c 4, J ·86, K ·83.

1207* to 1209* are derived from the Caverne d'Orrouy, Oise (region of the SUESSIONES), and are of the bronze age. *Bull. de la Société d'Anthrop.* v. 56.

These three plaster casts were presented by Professor Paul BROCA. They form the subject of some remarks by this able anthropologist, upon the change and increase of dimensions in casts over the skulls themselves. *Ib.* p. 449.

Of the six casts of the skulls of ancient Gauls, it should be noted that four are brachycephalic. RETZIUS, *Ethnologische Schriften*. Leipzig, 1864, Pl. iii. fig. v.—J. THURNAM, *Mem. of the Anthropol. Soc.* i. 481–508, Pl. iv.

2. Ancient Roman.

106. Ancient Roman. ♂. Imperf. calv.

Found in a stone coffin at Jort, dép. Calvados, in 1851.

Presented by Prof. A. CHARMA, Caen.

¹ *Voy. en Scandinavie, etc., sur la Corvette La Recherche, Géologie, etc.*, par M. Eugène ROBERT, 2^e Partie, 1854, p. 199: this contains Dr. ROBERT's account of his discovery of the dolmen, M. SERRES's Memoir read before the Acad. des Sci., and RETZIUS's communication to the Roy. Acad. of Stockholm. BROCA, *Bull. de la Soc. d'Anthrop.* iii. 320. THURNAM, *Mem. Anthropol. Soc.* i. 135, 491.

3. Frankish.

1. 208. Merovingian Frank. ♂, æt. e. 70. Calv.

A 83, B 22, C 15·3, *a* 5·2, *b* 5·2, *c* 4·9, D 15·5, E 7·5, F 5·8*p*, *a* 5·2, *b* 5·6, *c* 4·6, G 5·6, *a* 5, *b* 5, *c* 4, J 77, K 74.

A large platycephalic calvarium, with broad, low forehead.

2. 209. Merovingian Frank. ♀, æt. e. 50.

B 19·2, C 14·1, *a* 4·8, *b* 5, *c* 4·3, D 14·9, E 6·5, F 5·4*p*, *a* 4·7, *b* 5·4, *c* 4, G 5·5, *a* 4·5, *b* 4·9, *c* 4, H 4·5, J 83, K 84.

This small, but tall, brachycephalic skull is remarkable for breadth between the parietal bosses, and resembles the skulls of the so-called Malay races. The *foramen magnum* is almost circular.

3. 210. Merovingian Frank. ♂, æt. e. 70. Calv.

A 83·5, B 21·7, C 15·6, *a* 5·5, *b* 5·2, *c* 5, D 15·4, E 7·5, F 5·9*p*, *a* 4·9, *b* 5·5, *c* 4·6, G 5·7, *a* 4·8, *b* 4·9, *c* 4·3, I 5·5, J 78, K 76.

Another large platycephalic calvarium, with rather prominent supraeiliary ridges and broad and low frontal.

Nos. 208 to 210 are from the Merovingian Cemetery at Envermeu, near Dieppe, in the département of Seine Inférieure, and were disinterred in 1852 by the learned antiquary M. l'Abbé Cochet, *La Normandie Souterraine*, 2^e éd. 1855, p. 318. At p. 319 there is a small figure of No. 210.

4. 211. Merovingian Frank. ♀, æt. e. 17. Calv.

B 20·4, C 15·1, *a* 5·2, *b* 5·1, *c* 4·8, D 14·7, E 7·3, F 5·4*p*, *a* 4·5, *b* 4·9, *c* 4·4, G 5·1, *a* 4·7, *b* 4·9, *c* 4·5, J 74, K 70.

A beautiful ovoid calvarium, with lofty but narrow forehead. The parts of the occipital surrounding the foramen, and the tumid left squamous bone, indicate *plastic deformation*. It is not improbable that the subject may have had hydrocephalus in infancy.

5. 212. Merovingian Frank. ♀, æt. e. 80. Calv.

A 65, B 20·6, C 14·5, *a* 4·8, *b* 4·7, *c* 5, D 13·9, E 7·3, F 5·4*p*, *a* 4·4, *b* 5·3, *c* 4·4, G 4·7, *a* 4·4, *b* 4·5, *c* 4·3, I 4·9, J 74, K 64.

This calvarium of an aged woman is affected with the atrophy of old age. It is very thin. In both temporal regions there are indications of the "Involutionsskrankheit (*Malum senile*)" of VIREHOW. There is a distinct depression of the whole space covered by the temporal muscle, rising up to and limited by the *linea semicircularis*. The *basis cranii* exhibits plastic deformation.

6. 213. Merovingian Frank. ♂, æt. c. 70.

B 20·8, C a 4·9, D 14·5, E 7·3, F 5·6*p*, a 4·6, b 5·4, c 4·5, G a 4·6, b 4·7, H 4·8, I 5·3, J 7·6.

Has undergone posthumous distortion of the occipital.

Nos. 211 to 213 from the Frank Cemetery at Ouveille-la-Rivière, also near Dieppe, excavated by M. l'Abbé COCHET in 1854. *Sépultures Gaul. Rom. Franç. et Norm.* 1857, p. 140.

Nos. 208 to 213 presented by M. l'Abbé COCHET.

7. 1201. Merovingian Frank. ♀, æt. c. 60.

A 70, B 20·2, C 14·6, a 5·2, b 5, c 4·4, D 14·6, E 7, F 5·6*p*, a 4·6, b 5·4, c 4·3, G 5·4, a 4·6, b 4·7, c 3·9, H 4·8, I 5·2, J 80, K 77.

8. 1202. Merovingian Frank. ♂, æt. c. 60.

A 78·5, B 20·7, C 15, a 5·2, b 5, c 4·8, D 14·5, E 7·4, F 5·4*p*, a 4·7, b 5, c 4·3, G 5·4, a 4·4, b 4·7, c 4·2, H 4·6, I 5·1, J 73, K 73.

Has a nodular exostosis upon the posterior inferior angle of the right parietal.

9. 1203. Merovingian Frank. ♂, æt. e. 75.

A 79, B 21·1, C 15·3, a 5·2, b 5·2, c 5·1, D 15, E 7·5, F 5·1*t*, a 4·6, b 4·8, c 4·5, G 5·7, a 4·7, b 4·9, c 4·3, H 5, I 5·5, J 68, K 76.

There is a probability that the extreme doliohcephalism of this skull is dependent on *synostosis*. The ossification of the sagittal suture and of the extremities of the coronal is complete, whereas the other sutures are decidedly more traceable and open. The calvarium inclines much to the scaphocephalic form. As might have been expected, these Frankish crania, although differing among themselves, agree closely with the varieties met with in Anglo-Saxon skulls—so closely that the two series could hardly be distinguished.

Nos. 1201, 1202, and 1203 proceed from the Merovingian cemetery of Chelles, near Pierrefonds (Oise). *Bull. de la Soc. d'Anthrop.* iv. 464. They were presented by Professor Paul BROCA.

Average Measurements of the 5 ♂ Merovingian Skulls.

A 81, B 21·2, C 15·3, a 5·2, b 5·1, c 4·7, D 15, E 7·4, F 5·5, a 4·8, b 5·3, c 4·4, G 5·6, a 4·7, b 4·8, c 4·2, H 4·8, I 5·3, J 72, K 74.

b. MODERN PEOPLE OF FRANCE.

I. 23. French. ♀, æt. e. 65.

A 64, B 19·5, C 13·5, *a* 4·4, *b* 4·7, *c* 4·4, D 13·4, E 6·6, F 5·5 *t*,
a 4·5, *b* 4·2, *c* 4·2, G 5, *a* 4, *b* 4·4, *c* 3·6, H 4·4, I 5, J 84,
 K 75.

The calvarium of this small, forbidding-looking skull is very difficult to describe. It has much of a cylindrocephalic form, with a very low frontal, a high paulo-postparietal, a flat, truncated parieto-occipital, and prominent, out-bulging temporal regions. The anterior and vertical regions of the cerebrum have been very imperfectly developed. In writing the First Decade of the *Crania Britannica*, p. 43, I was led to regard it

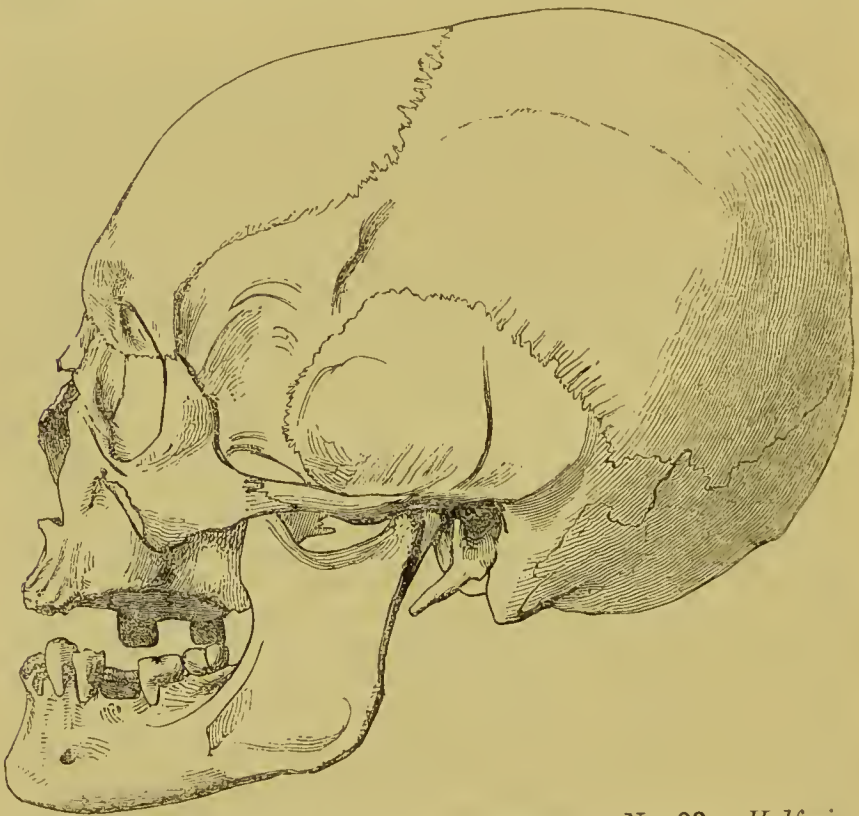


Fig. 63.—*Synostotic Skull of a French Woman.*—No. 23.—*Half-size.*

as an instance of undesigned artificial deformation, but now perceive that it owes its peculiarities chiefly to synostosis. The spheno-frontal, spheno-parietal, and outer portions of the coronal sutures are completely ossified; hence the extreme depression of the forehead, somewhat pseudo-Neanderthal. The obliteration of the posterior half of the sagittal and of all the middle portions of the lambdoidal sutures has prevented the usual compensatory

development in this direction, and the usual dolichocephalism. The open state of the anterior half of the sagittal suture has allowed of a partial growth in this part; but the chief compensatory development is in the swollen temporal regions, where the squamous sutures are perfectly open. It is klinocephalic, and comes nearest to VIRCHOW's *platycephali* or to LUCÆ's *tapeinocephali*¹.

This skull was bought of M. ALEXANDRE, a well-known London dealer, in 1850. He told me, in a letter, that the old woman had died in *prison*, and "had the worse dispositions and not a good, according to the great phrenologist, DUMOUTIER, who had the kindness to examine the skull."

2. 29. French. ♀, æt. c. 50. Imperf. ealv.

B 19·4, C 14, *a* 4·9, *b* 4·3, *c* 4·8, D 14·1, E 6·7, F 5·3 *p*, *a* 4·4, *b* 4·9, *c* 4, G 5·1, *a* 4·5, *b* 4·6, *c* 3·9, I 4·9, J ·79, K ·76.

A small short ealvarium, remarkable for the depth of the orbits, which descend below their lower margins, and thus convert them into sharp ridges. There is also a deep depression in the orbital plate of the ethmoid, on the left side.

3. 30. French. ♂, æt. c. 50. Imperf. ealv.

B 22, C *a* 5·4, *b* 5·2, E 7·8, F *a* 5·1, G 5, I 5·2, K ·64.

A large platycephalic calvarium.

4. 31. French. ♀, æt. c. 18. Imperf. ealv.

B 20·6, D 14·4, E 7·3, F 5·5 *t*, *a* 4·7, *b* 4·6, *c* 4·1, G *a* 4·6, *b* 4·7, *c* 4, I 5·3, J ·76.

Has a frontal suture.

5. 32. French. ♀, æt. e. 60. Imperf. ealv.

A 75·5, B 20·4, C 14·9, *a* 5·1, *b* 5·1, *c* 4·7, D 15·2, E 7·1, F 5·5 *p*, *a* 4·6, *b* 5·2, *c* 4·5, G 5·5, *a* 4·7, *b* 4·8, *c* 4, J ·77, K ·77.

A tall globular ealvarium.

6. 33. French. ♂, æt. e. 60. Calv.

A 68, B 20·6, C 15, *a* 5·1, D 14·5, E 7·2, F 5·6 *p*, *a* 4·9, *b* 5·2, *c* 4·2, G 5·1, *a* 4·5, *b* 4·6, *c* 4, I 5·4, J ·77, K ·70.

A platycephalic ealvarium with prominent supraeiliary protuberance and low forehead, so as to render it somewhat pseudo-Neanderthal.

¹ Since the above was written, I have discovered that it was to the figure of this skull, given at p. 43 of the *Crania Britannica*, and not to that of the Anglo-Saxon woman on p. 40, as I had erroneously concluded, that Prof. LUCÆ made reference in his *Morphologie der Rassen-Schädel*, S. 53. The oversight he pointed out in this passage was quite apparent on a re-examination of the skull No. 23.

Nos. 29 to 33 are derived from the Catacombs at Arles.

It may be worthy of remark that none of the calvaria from Arles are brachycephalic. The Arlesians are a mark-worthy race, handsome and fair, and probably retain both Greek and Gothic blood.

7. 851. French. ♀, æt. c. 25. Imperf. calv. D.C.
B 19·1, C 14·4, c 4·9, E 6·6, F 5·3, a 4·3, b 4·8, c 4·1, G 5·4,
J ·80, K ·81.

A singular synostotic calvarium of a native of *Lorraine*. The sagittal and coronal sutures are totally obliterated, there being a slight depression in the line of the former. All the other sutures usually open at an early adult age are perfectly so, save the spheno-frontal and spheno-parietal of the left side. The lambdoidal is an irregular vandyked suture. The form of the calvarium is small, very high, and short. The small *foramina parietalia* are present. Such a peculiar combination of synostosed bones does not occur among either VIRCHOW or LUCÆ's definitions. The calvarium may be best designated pachycephalic.

8. 873. French. ♀, æt. c. 80. Imperf. calv. D.C.
A 69, B 20·7, C 14·8, a 5, b 5·2, c 4·6, D 13·8, E 7·4, F 5·4p,
a 4·7, b 5·3, c 4·3, G 4·8, a 4·3, b 4·5, c 4·2, J ·73, K ·65.

A change has taken place in the left glenoid cavity of the temporal, by senile atrophy. The anterior tubercle has been absorbed, so as to convert the whole into a uniform hollow, which encroaches considerably on the root of the zygoma.

9. 881. French. ♂, æt. c. 70. D.C.
A 80, B 21·3, C 15, a 5·4, b 4·8, c 4·8, D 15·2, E 7·2, F 6, a 4·9,
b 5·6, c 4·4, G 5·3, a 4·9, b 4·9, c 3·9, H 4·6, I 5·5, J ·83,
K ·73.

A large globular brachycephalic skull.

10. 882. French. ♂, æt. c. 60. D.C.
A 79, B 20·7, C 14·6, a 5·2, b 5·1, c 4·3, D 14·2, E 7·1, F 5·5p,
a 5, b 5·3, c 4·1, G 5·3, a 4·8, b 4·6, c 3·8, H 5, I 5·3, J ·77,
K ·74.

Frontal suture persistent.

11. 947. French. ♂, æt. c. 40. Calv. D.C.
A 75, B 20·3, C 14·3, a 5, b 4·8, c 4·5, D 14·8, E 6·9, F 5·7p,
a 4·9, b 5·3, c 4·6, G 5·3, a 4·4, b 4·9, c 4·1, I 5·2, J ·82,
K ·76.

A brachycephalic calvarium of "a murderer, who was hanged at Winchester. Presented to DEVILLE by Sir Jas. GARDINER, 1825. A base, but very clever villain."

Has a very low frontal and vertical region, and is platycephalic. The sagittal and all the middle part of the lambdoidal sutures are ossified. The frequency of *synostosis* in the crania of criminals and persons of bad character seems to be an evidence of the influence of a derangement of organization upon the moral manifestations. See Nos. 23, 387, 910, 912, 947, 948, 1016¹.

12. 1010. French. ♂, æt. c. 80. Calv. D.C.

B 21·2, C 14·9, D 15·8, E 7·3, F 5·8 *p*, *a* 5·2, *b* 5·5, *c* 4·5, G 5·3, *a* 4·9, *b* 4·8, *c* 3·9, I 5·6, J 79, K 72.

No nasal, but a frontal suture; alveoli entirely absorbed. "A French female. A fine preparation of the falx, tentorium, dura mater, and blood-vessels. Purchased of M. LORRIONE, Conservator of the Museum of Comp. Anat., Paris, at the suggestion of Drs. GALL and SPURZHEIM, 1829." DEVILLE'S *Catalogue*.

13. 1047. French. ♂, æt. c. 35. Imperf. calv. D.C.

A 77, B 20·3, C 14·5, *a* 5·3, *b* 4·9, *c* 4·3, D 15·3, E 6·8, F 5·8 *p*, *a* 5, *b* 5·5, *c* 4, G 5·5, *a* 4·7, *b* 4·8, *c* 3·9, J 85, K 80.

A globose brachycephalic calvarium of unknown origin.

14. 1082. French. ♂, æt. c. 45.

A 77, B 20·8, C 15·2, *a* 5·1, *b* 5, *c* 5·1, D 15·3, E 7·3, F 5·6 *t*, *a* 4·8, *b* 5, *c* 4·6, G 5·5, *a* 4·6, *b* 4·8, *c* 4·5, H 4·6, I 5, J 77, K 75.

15. 1083. French. ♀, æt. e. 30.

A 62, B 18·5, C 12·8, *a* 4·5, *b* 4·4, *c* 3·9, D 12·9, E 6·4, F 5·2 *t*, *a* 4·4, *b* 4·5, *c* 4·3, G 4·7, *a* 4, *b* 4·1, *c* 3·6, H 4·1, I 4·8, J 81, K 73.

16. 1084. French. ♂, æt. e. 40.

A 69, B 20·5, C 14·8, *a* 5·2, *b* 5·3, *c* 4·3, D 14·9, E 7·4, F 5·3 *p*, *a* 4·4, *b* 5·2, *c* 4, G 5·3, *a* 4·6, *b* 4·7, *c* 4·1, H 4·6, I 4·7, J 71, K 71.

17. 1085. French. ♂, æt. e. 35.

A 84, B 21·2, C 15, *a* 5·2, *b* 4·8, *c* 5, D 15·5, E 7·2, F 5·9 *p*, *a* 5·1, *b* 5·1, *c* 5, G 5·5, *a* 4·8, *b* 4·9, *c* 4·2, H 4·8, I 5·2, J 82, K 76.

¹ VIMONT, *Traité de Phrénologie humaine et comparée*, 1836, pl. cxii. fig. 1, "Crâne de la femme Le Couffé." LUCAS, *Schädel bekannter Personen*, 1857, Taf. iv. u. v., Taf. viii., Taf. ix., Taf. x., Taf. xi. u. xii. J. Barnard DAVIS, *On Synostotic Crania among Aboriginal Races*, p. 21.

18. 1086. French. ♀, æt. e. 18.

A 63, B 19·2, C 13·8, *a* 4·6, *b* 4·9, *c* 4·3, D 13·4, E 6·9, F 5·1 *t*,
a 4·3, *b* 4·8, *c* 4·2, G 5, *a* 4·2, *b* 4·4, *c* 4, H 4·5, I 4·4, J 7·4,
K 7·2.

19. 1087. French. ♀, æt. e. 50.

A 76, B 20·8, C 15, *a* 5·1, *b* 5·1, *c* 4·8, D 14·3, E 7·3, F 5·7 *p*, *a* 5,
b 5·5, *c* 4·4, G 4·7, *a* 4·3, *b* 4·5, *c* 4·3, H 4·5, I 4·7, J 7·8,
K 6·4.

This skull is probably affected with "plastie deformation."

Nos. 1082 to 1087 were purchased at the sale of a dealer,
J. HARNETT.

20. 1312. French. ♂, æt. e. 35. Soldier. V.L. d. J.

A 74·5, B 20, C 14·1, *a* 4·8, *b* 4·6, *c* 4·7, D 14·1, E 6·9, F 5·4 *p*,
a 4·5, *b* 4·8, *c* 4·4, G 5·3, *a* 4·5, *b* 4·5, *c* 3·9, H 4·8, I 5·1,
J 7·8, K 7·6.

Has the small pneumatic process of HYRTL on the right side.

21. 1313. French. ♀, æt. e. 35. V.L. d. J.

A 70·5, B 20, C 14·3, *a* 5·1, *b* 4·7, *c* 4·5, D 14·7, E 6·9, F 5·5 *p*,
a 4·5, *b* 4·9, *c* 4·2, G 5·3, *a* 4·7, *b* 4·7, *c* 3·9, H 4·9, I 5·1,
J 7·9, K 7·6.

Has the *processus pneumaticus* small on both sides.

Average Measurements of French Skulls.

♂, 9 perfect specimens, A 74·8, B 20·7, C 14·7, *a* 5, *b* 4·9, *c* 4·6,
D 14·9, E 7·1, F 5·6, *a* 4·8, *b* 5·2, *c* 4·4, G 5·3, *a* 4·6, *b* 4·7,
c 4, H 4·7, I 5·2, J 7·8, K 7·4.

♂, 13 miscellaneous specimens, A 76, B 20·7, C 14·7, *a* 5·2, *b* 4·9,
c 4·6, D 14·9, E 7·1, F 5·6, *a* 4·8, *b* 5·2, *c* 4·3, G 5·3, *a* 4·6,
b 4·7, *c* 4, H 4·7, I 5·2, J 7·8, K 7·3.

Extremes, A 68–84, J 71–85, K 64–80; 4 of 13 are brachy-
cephalic.

♀, 4 perfect specimens, A 67·8, B 19·6, C 13·9, *a* 4·8, *b* 4·7, *c* 4·3,
D 13·8, E 6·8, F 5·3, *a* 4·5, *b* 4·9, *c* 4·2, G 4·9, *a* 4·3, *b* 4·4,
c 3·9, H 4·5, I 4·7, J 7·7, K 7·2. Extremes, A 62–76, J 73–
81, K 64–81.

26 ♂ and ♀, A 71·6, B 20·1, C 14·3, *a* 4·9, *b* 4·8, *c* 4·4, D 14·3,
E 6·9, F 5·4, *a* 4·6, *b* 5, *c* 4·2, G 5·1, *a* 4·4, *b* 4·5, *c* 3·9,
H 4·6, I 4·9, J 7·8, K 7·3.

E. SANDIFORT, *Museum Anat.* vol. ii., "Cranium Galli." VIMONT, *Traité de Phrén.* pl. xcvii. fig. 2, Skull of Bébé, the dwarf of King Stanislas. DUMOUTIER, *Voy. au Pôle Sud, Anthropologie*, pl. 25 bis, figs. 1, 2, 3, 4.

C. RACES OF SPAIN AND PORTUGAL.

I. 910. Spanish. "PERON." ♂, æt. c. 50? D.C.
A 68, B 20·8, C 15·3, D 15, E 7·5, F 5·5 *p*, *b* 5·1, *c* 4·5, G 5·6,
a 4·9, *b* 4·8, *c* 4·1, H 4·8, I 5·2, J ·73, K ·74.

From the collection of Joshua BROOKES. Inscribed by himself, "PERON, the Spanish assassin. Presented by J. H. GREEN, Esq."

A thick, heavy (weighing $40\frac{1}{2}$ ozs.), dolichoecephalic, tall skull, affected with *hyperostosis*. The sutures are synostotic—the nasal, coronal, sagittal, and lambdoid completely ossified. The middle molars of the superior maxillary project beyond the level of the other teeth, from the want of apposition of the two lower ones, which have been lost.

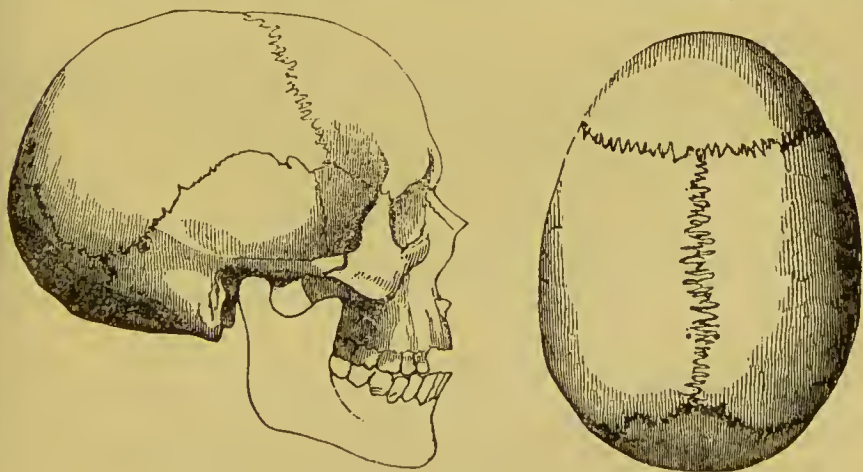
2. 974. Spanish. ♂, æt. c. 35. Calv. D.C.
A 80, B 20·9, C 14·9, *a* 4·9, *b* 5·5, *c* 4·5, D 15·4, E 7·3, F 5·8 *p*,
a 5, *b* 5·6, *c* 4·2, G 5·5, *a* 4·7, *b* 4·9, *c* 4, J ·79, K ·75.

A large platycephalic calvarium of the captain of a slave-ship, but having a broad and very low forehead, resembling the ancient Roman. The vaginal process of the temporal on both sides is unusually broad and deep.

3. 1006. Spanish. "Pedro GONZALES." ♂, æt. c. 40. Calv. D.C.
A 73·5, B 20·6, C 14·7, *a* 5, *b* 5, *c* 4·7, D 15·2, E 7·3, F 5·6 *t*,
a 4·8, *b* 4·8, *c* 4·5, G 5·7, *a* 4·8, *b* 4·9, *c* 4·1, J ·76, K ·78.

A Spanish pirate. A smaller calvarium, but much resembling No. 974. Has a sword-cut on the frontal bone.

4. 1204*. Basque. ♂, æt. c. 35. (No. 21.) Calv.
A 77·8, B 21, C 15, *a* 5·3, *b* 4·5, *c* 5·2, D 14·7, E 7·5, F 5·6 *p*, *a* 4·6,
b 4·5, *c* 4·4, G 5·3, *a* 4·6, *b* 4·6, *c* 4·2, I 5·2, J ·74, K ·70.



Figs. 64 & 65.—Cranium of Basque, Guipuscoa.—No. 1204*.—Quarter-size.

5. 1205*. Basque. ♂, æt. c. 60. (No. 24.) Calv.

A 81·1, B 21·5, C 14·6, *a* 4·8, *b* 5·2, *c* 4·6, D 15·8, E 7·3, F 6·1 *p*,
a 5·4, *b* 4·7, *c* 4·4, G 5·2, *a* 4·5, *b* 4·6, *c* 4, I 5·2, J ·83, K ·71.

A very platycephalic calvarium, which retains its frontal suture.

6. 1206*. Basque. ♀, æt. c. 35. (No. 39.) Calv.

A 77·8, B 21·2, C 14·7, *a* 4·8, *b* 5·4, *c* 4·5, D 14·4, E 7·4, F 5·5 *p*,
a 5, *b* 4·7, *c* 4·3, G 5·1, *a* 4·5, *b* 4·8, *c* 4·4, I 4·6, J ·74, K ·69.

The originals of these three Basque calvaria were obtained in the cemetery of Zaraus, in Guipuscoa. *Bull. de la Soc. d'Anthrop.* iii. 579, iv. 38. Of the three examples moulded, 1204 and 1206 were selected as representatives of the most general dolichocephalic type of the crania obtained, and 1205 as that of the exceptional brachycephalic form, this being the most brachycephalic (almost the only brachycephalic) skull of the whole series of 60 procured. RETZIUS had placed the Basques among his "European Brachycephali," *Ethnologischen Schriften*, 1864, S. 34, 139. These casts are the subjects of Prof. BROCA's remarks in the *Bulletins*, v. 449.

Presented by Professor Paul BROCA.

7. 185. Portuguese? ♂, æt. c. 35. Calv.

A 75·5, B 21·1, C 14·9, *a* 4·9, D 14·8, E 7·4, F 5·7 *t*, *a* 4·9, *b* 4·9,
c 4·4, G 5, *a* 4·4, *b* 4·6, *c* 4·4, I 5·3, J ·77, K ·67.

A somewhat platycephalic calvarium, with very gibbous superior occipital region. Has a large triquetral bone in the left limb of the lambdoid, and three small ones at the occipital termination of the sagittal suture.

8. 186. Portuguese? ♀, æt. c. 35. Calv.

A 66·5, B 19·5, C 13·7, *a* 4·5, *b* 4·9, *c* 4·3, D 14·4, E 6·7, F 5·4 *p*,
a 4·8, *b* 5·2, *c* 4·3, G 5·2, *a* 4·5, *b* 4·5, *c* 3·7, I 5, J ·80, K ·77.

A brachycephalic calvarium with frontal suture.

9. 187. Portuguese? ♀, æt. c. 50. Calv.

A 66·5, B 20·2, C 14·3, *a* 5, *b* 4·8, *c* 4·5, D 14·2, E 7·1, F 5·3 *p*,
a 4·6, *b* 5, *c* 4·3, G 5·3, *a* 4·7, *b* 4·5, *c* 3·9, I 5, J ·74, K ·74.

10. 188. Portuguese? ♀, æt. c. 80. Imperf. calv.

A 63·5, B 19·9, C 14·1, *a* 4·8, *b* 4·9, *c* 4·1, D 14·6, E 7, F 5·3 *p*,
a 4·5, *b* 4·7, *c* 4·1, G 5, *a* 4·6, *b* 4·7, *c* 3·9, J ·75, K ·71.

A small asymmetrical calvarium, oblique both in the frontal and occipital regions.

11. 189. Portuguese? ♀, æt. c. 80? Calv.

A 59, B 18·6, C 13·3, *a* 4·2, *b* 4·6, *c* 3·5, D 13·7, E 6·4, F 5·3 *p*,
a 4·5, *b* 4·7, *c* 3·9, G 5, *a* 4·4, *b* 4·5, *c* 3·8, I 4·7, J 82, K 78.

A very small brachycephalie calvarium of a woman. The sutures are persistent, yet every tooth and every portion of the alveoli has perished. Presents parieto-occipital flattening on the left side.

Nos. 185 to 189 are marked "Madeira, Sta. Luzia, 1834," which is all that is known of them, as they were purchased.

12. 927. Portuguese. ♂, very aged? Imperf. calv. D.C.

A platycephalie calvarium brought from the island of Madeira, in 1821, by Dr. GAMBLE, said to be the calvarium of a Franciscan monk. From the collection of Joshua BROOKES.

The sutures of the vault of this thick calvarium, the coronal, sagittal, and lambdoid, are wholly ossified and obliterated; those of the sides are open. The middle of each parietal is occupied by a large plane surface, slightly depressed; the temporal portion of each also exhibits signs of absorption, just in the same manner as in the thin and light calvarium of the Merovingian Frank woman (No. 212); and the region of the obliterated lambdoidal suture is likewise depressed. These indications of the absorption of the outer table may be the result of senile atrophy, but are coincident with a thick and heavy state of the bones in general. In No. 26, the skull of a very aged Chinese, this peculiar atrophy of the cranial bones first presented itself to my notice (in 1853). Prof. VIREHOW has an able memoir upon the subject, *Ueber die Involutionenkrankheit* (Malum senile) *der platten Knochen, namentlich des Schädels*, Gesammelte Abhandlungen, 1856, S. 1000. In this memoir there is a reference to preceding writers.

13. 1017. Portuguese? ♂, æt. c. 70. Madeira. Calv. D.C.

A 78, B 20·8, C 15, *a* 5·1, *b* 5·2, *c* 4·7, D 15·1, E 7·3, F 5·6 *p*,
a 4·8, *b* 5·1, *c* 4·2, G 5·4, *a* 4·9, *b* 4·9, *c* 4·2, I 5, J 76, K 74.

A heavy dolichocephalie calvarium, presenting the same absorption of the alveoli as Nos. 188 and 189, and, although obtained from a different source, inscribed in exactly the same manner by the same hand, "Madeira, Sta. Luzia, 1834."

14. 1018. Portuguese? ♂, æt. e. 65. Imperf. calv. D.C.
B 21, D 15, E 7·3, F 5·8, *a* 4·6, *b* 5·7, I 5·4, J 79.

15. 1274. Portuguese. ♀, æt. e. 30. Madeira. Calv.
A 70·5, B 19·4, C 14·5, *a* 5, *b* 5, *c* 4·5, D 14·3, E 6·9, F 5·3 *p*,
a 4·3, *b* 4·8, *c* 4, G 5·6, *a* 4·5, *b* 4·7, *c* 3·9, I 4·5, J 78, K 82.

16. 1275. Brazilian, of Portuguese descent. ♂, æt. 35. Calv.
 A 78, B 21·7, C 15·3, *a* 5·2, *b* 4·8, *c* 5·3, D 14·9, E 7·6, F 5·7 *p*,
a 4·9, *b* 4·8, *c* 4·4, G 5·5, *a* 4·6, *b* 4·7, *c* 4·4, I 5·2, J ·75,
 K ·72.

A very large, long, low platycephalic calvarium of Neanderthaloid form, owing to premature closure of sutures. The sagittal is wholly obliterated, and all the central portion of the coronal, the lambdoid partially so.

1274 and 1275 belong to the series of skulls collected in Guiana by the late Sir R. H. SCHOMBURGK.

Average Measurements of Five Males from Spain and Madeira.

A 74·9, B 20·8, C 14·9, *a* 5, *b* 5·1, *c* 4·7, D 15·1, E 7·3, F 5·7,
a 4·8, *b* 5·2, *c* 4·3, G 5·4, *a* 4·7, *b* 4·8, *c* 4·1, H 4·8, I 5·2,
 J ·78, K ·74.

Extremes, A 70·8–80, J ·76–·79, K ·67–·78. All moderately dolichocephalic; so also are the five Peninsular skulls in Van der HOEVEN's *Catalogus*, Nos. 30–34, in which J averages ·77, and K ·78.

D. RACES OF ITALY, SARDINIA, AND GREECE.

a. ANCIENT RACES.

1. *Oscan.*

1049. Oscan. ♂, æt. e. 70. Calv.
 A 73·5, B 19·6, C 14·8, *a* 5, *b* 5·1, *c* 4·7, D 15·1, E 6·9, F 5·5 *p*,
a 4·2, *b* 5·2, *c* 4, G 5·6, *a* 4·8, *b* 4·8, *c* 4, I 5·2, J ·79, K ·85.

A small, but tall, almost brachycephalic calvarium, with a very narrow forehead and prominent aquiline nose. The narrowness of the frontal region is a striking diversity from the typical Roman.

Found in an ancient tomb near Nola, in 1859, "On le croit antérieur à l'ère chrétienne."

Presented by Giustiniano NICOLUCCI, M.D., the accomplished author of *Delle Razze Umane*, 2 vols. 8vo, Napoli, 1857.

2. *Etruscan.*

1. 769. Etruscan. ♀, æt. c. 15? Imperf. cran.

D 14·1, E 6·6, F 5·5, G 5·1, J 83, K 77.

Found in an ancient Etruscan cemetery at Villanova, near Bologna, with a bronze fibula.

Presented by Il Conte Giovanni GOZZADINI. *Di un Sepulcreto Etrusco scoperto presso Bologna*, 1854, 4to. *Intorno ad altre settantuna Tombe del Sepulcreto Etrusco*, Cenni del Conte G. GOZZADINI, 1856, 4to. The Appendix, No. 2, of the first of these works (both of which I owe to the great politeness of the Count, and to the kind offices of Prof. Francesco RIZZOLI of Bologna), consists of a letter from Prof. L. CALORI upon two skeletons from the Villanova sepulchre, and especially on the skull of one of them. In this letter, the Professor gives the measurement of the skeletons, which had belonged to individuals of the male sex who had died in the vigour of life. The length of one was 5 ft. 1 in., that of the other 5 ft. 3·6 in., when reduced to the English standard. His further remarks are principally directed to oppose the impression, derived from the prognathism of the crania, that the Etruscans were allied to Ethiopic races. In Tav. vii. is a small figure of the more perfect of the skulls but, still, as it were, in its matrix.

2. 1173. Etruscan. ♀, æt. c. 25. Calv.

A 82, B 21, C 14·9, *a* 5, *b* 4·2, *c* 5·7, D 15·1, E 7·2, F 5·8 *p*, *a* 4·7, *b* 5·5, *c* 4·6, G 5·4, *a* 4·6, *b* 4·8, *c* 4·3, I 4·3, J 80, K 75.

This large calvarium of a young woman was found, in 1857, in an Etruscan tomb near Perugia (antiq. PERUSIA), between the road from Tuseany and the Lake Trasimeno. The sepulchre contained five urns, upon one of which was an inscription in

MANRYNIYTHAIMO

Fig. 66.—*Sepulchral Inscription of TANNIA LUNEJA. Ancient Etruscan.*

Etruscan letters. This has been interpreted by Count G. C. CONESTABILE (*Bull. dell' Inst. di Corr. Archæol. Roma*, 1858, p. 71), "TANNIA LUNEJA (or LIVINEJA) LUSENII (or LUSANII) uxor." The Count concludes that the tomb belonged to the LUXANIA family, many times mentioned in the series of Perugian families.

Presented by Count CONESTABILE, of Perugia, to Dr. G. NICOLUCCI, who has enriched my collection by this important addition.

Dr. NICOLUCCI gives a curious comparative table of some

measurements of the skulls of an Etruscan from Veii, of a Volseian from Aquino, of three Oseans from ancient Capua, Cuma, and Pompeii, of one of the Sarrastes from Nuccia, and of a modern Neapolitan and Soranan. *Razze Umane*, i. 147.

References.—CUVIER, *Règne Animal*, par MILNE-EDWARDS, pl. i. fig. 1. *Intorno ad un Cranio Etrusco*, Memoria letta al Secondo Congresso Italiano, dal Dr. Antonio GARBIGLIETTI, con Tav. Figured again in NICOLUCCI, *Razze Umane*, vol. i. Tav. ix.¹ In the same volume, Tav. viii., is a carefully executed portrait of an ancient Etruscan from a terracotta head. *Saggio di Studi Craniologici sull' antica Stirpe Romana e sulla Etrusca*, dal Prof. Carlo MAGGIORANI: Roma, 1858, con Tav., 4to. V. BAER, *Ueber den Schädelbau der Rätischen Romanen*, 1859.

3. Phœnician.

1174. Phœnician. ♂, æt. c. 65. *Tharros, Sardinia*. Calv.
A 79, B 20·6, C 15, *a* 5·1, *b* 5·1, *c* 4·8, D 15, E 7·3, F 5·6 *t*, *a* 4·7,
b 5·1, *c* 4, G 5·6, *a* 4·7, *b* 4·8, *c* 4·2, I 5·3, J 7·6, K 7·6.

The sex of this calvarium is somewhat masked by the very prominent supraoccipital region. It is distinguished for its length, this prominence, and the lowness of the parietal tubers. There is no great eminence of the supraorbital region. It is thick and has a very projecting nose, raised high on broad processes of the superior maxillaries. Viewed vertically, it presents a nearly regular long oval, the frontal extremity being only a little broader than the occipital. The four remaining teeth, viz. the two premolars of the left side and the two adjoining molars, are much worn down in an irregular manner, nearly to the limits of their crowns, from the use of hard food. The first molar of the opposite side and the third molar of both sides have been lost early in life.

This calvarium of a Phœnician, of the utmost rarity, was discovered in the necropolis of the ancient city of Tharros, in the island of Sardinia, in 1854. The tomb contained three skeletons, laid horizontally; and near to the door was found a

¹ It is singular that this Etruscan skull, described by the distinguished Prof. A. GARBIGLIETTI, exhibits, on both sides, the suture running along the lower edge of the *os jugale*, which divides the bone into two portions. An anomaly so rare has been the subject of a subsequent memoir by Prof. GARBIGLIETTI, in which he has shown that this accessory portion of the malar bone is the persistency of an ossicle, having its own centre of ossification, present in the foetal state. *Di un singolare anomalia dell' Osso jugale ossia zigomatico Noterella*. Torino, 1866. In describing the Dayak skulls, Nos. 1244 and 1409, I shall recur to this unusual phenomenon, where it will be seen that J. F. MECKEL, as the result of his observations on the development of the jugal bone, asserts that he has always found it to originate from one ossific centre.

sandstone tablet, in the form of a little temple, upon which were inscribed three lines in Phœnician characters. This inscription has been read, with only a slight variation, by the three learned Italians to whom it has been submitted, as a simple memorial to KATAM, or JAGHTAM, THE SON OF JUBAL. Hence the most complete evidence of the authenticity of this ancient calvarium has been obtained.

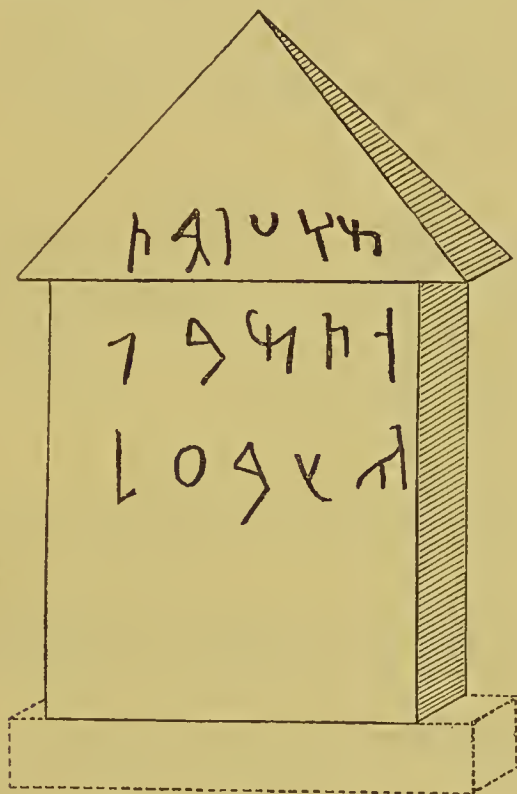


Fig. 67.—Sepulchral Tablet of KATAM, Son of Jubal. Phœnician.

To the generous and never-failing kindness of Dr. Giustignano NICOLUCCI, who occupies so distinguished a place among the scholars and anthropologists of Italy, I owe this interesting object. Upon it he has written an erudite and lucid memoir, entitled *Di un antico cranio fenicio rinvenuto nella Necropoli di Tharros in Sardegna*, inserted in the *Memorie della R. Accademia delle Scienze di Torino*, serie ii. tomo xxi., 1863. In this valuable essay, the author has given a careful and elaborate description of the relie, with an extended series of measurements, and illustrated the whole by three accurate full-sized lithographs of the calvarium, viz. a profile, a front, and a vertical view¹. *Anthropological Review*, ii. 30.

¹ Dr. NICOLUCCI in his memoir, speaking of this calvarium and the friend who placed it in his hands, says, with as much elegance as truth, "Che ora

Dr. G. NICOLUCCI has since described, figured, and measured a further series of Phœnician skulls, contained in the Museum of Antiquities of Cagliari. The result of this investigation is to confirm his opinion, that these crania ought to be classed with those of other Semites, viz. Arabs and Jews. *Bull. de la Soc. d'Anthrop.* v. 703. This memoir concludes with the most important and interesting observation, confirmed in such numerous instances among other races, that modern Sardinian crania present the same characters as these ancient Phœnician ones, and that the physiognomies of numbers of Sardinians of the present day do not differ from the Phœnician type found on the monuments of the island.

4. Roman.

1. 35. Ancient Roman. ♀, æt. e. 15. Imperf. calv.

A brachycephalic calvarium of a girl, found in the cellar of the Villa of DIOMEDES, at Pompeii, in 1842, by M. L. JULLIAN of Nîmes. When found, the *reticulum* for restraining the hair was with it, and is still preserved.

Purchased of M. JULLIAN.

2. 128. Ancient Roman. ♂, æt. e. 30.

A 73, B 20·9, C 15, a 4·9, b 5·2, c 4·9, D 14·5, E 7·2, F 5·6t, a 4·7, b 5·2, c 4·5, G 5·5, a 4·7, b 4·8, c 4·2, H 4·9, I 5·5, J ·77, K ·76.

This remarkably fine skull has prominent supraëiliary ridges, an elevated aquiline nose, quadrate but low forehead, a full ovate calvarium, and a combination of handsome features.

3. 129. Ancient Roman. ♂, æt. e. 35.

A 67·5, B 20·5, C 14·6, a 4·9, b 5·2, c 4·5, D 15, E 7, F 5·7p, a 4·9, b 5, c 4·3, G 5·4, a 4·6, b 4·7, c 4·1, H 4·4, I 5, J ·81, K ·77.

A brachycephalic skull, more quadrate in the forehead and vertical in outline than No. 128.

4. 130. Ancient Roman. ♂, æt. e. 65.

A 77, B 21·6, C 15·3, a 5·2, b 5·4, c 4·7, D 14·9, E 7·5, F 5·9p, a 4·9, b 5, c 4·6, G 5·3, a 4·6, b 4·7, c 4·2, H 4·5, I 5·5, J ·78, K ·70.

A capacious platycephalic cranium, with a low forehead, rugged quadrate face, and square lower jaw; altogether presenting a model of the countenance of an ancient Roman.

fà parte della mia collezione craniologica per la squisita gentilezza del mio distinto amico Cav. Antonio GARBIGLIETTI." It is thus from the amenities of two of the bright ornaments of Italian science, equally polite and learned, that I am privileged to include this Phœnician relic in my Catalogue.

5. 131. Ancient Roman. ♀, æt. c. 13.

A skull of much interest, by reason of its exhibiting the Roman features, in the female sex, at so early a period of life, in a decided manner.

6. 132. Ancient Roman. ♀, æt. c. 25. Calv.

A 64, B 19·2, C 13·5, *a* 4·5, *b* 4·9, *c* 4·1, D 14·6, E 6·5, F 5·4 *p*,
a 4·3, *b* 5, *c* 4·2, G 5·3, *a* 4·5, *b* 4·7, *c* 3·9, I 4·9, J·83, K·81.

A small brachycephalic calvarium of a woman.

7. 133. Ancient Roman. ♀, æt. c. 20. Calv.

A 51, B 18·5, C 13·5, *a* 4·8, *b* 4·8, *c* 3·9, D 13, E 6·4, F 5 *p*, *a* 4·1,
b 4·7, *c* 3·9, G 5, *a* 4·1, *b* 4·2, *c* 3·5, I 4·6, J·78, K·78.

A very small calvarium of a young woman, remarkable for its low Grecian nose.

8. 135. Ancient Roman. ♂, æt. c. 25. Calv.

A 73·5, B 20·5, C 15·1, *a* 5·2, *b* 5·1, *c* 4·8, D 14·5, E 7·4, F 5·4 *t*,
a 4·4, *b* 5, *c* 4·1, G 5·5, *a* 4·7, *b* 4·6, *c* 3·8, I 5·2, J·73, K·74.

A dolichocephalic calvarium with narrow forehead, devoid of ethnic character.

9. 136. Ancient Roman. ♂, æt. c. 70. Calv.

A 71, B 21·3, C 15·1, *a* 5·2, *b* 5·1, *c* 4·8, D 15·1, E 7·4, F 5·7 *t*,
a 4·9, *b* 5, *c* 4·6, G 5·3, *a* 4·7, *b* 4·8, *c* 4·2, I 5·5, J·77, K·71.

Exhibits annular depression across the fore part of the parietal bones, from premature ossification of the sutures around the alisphenoids.

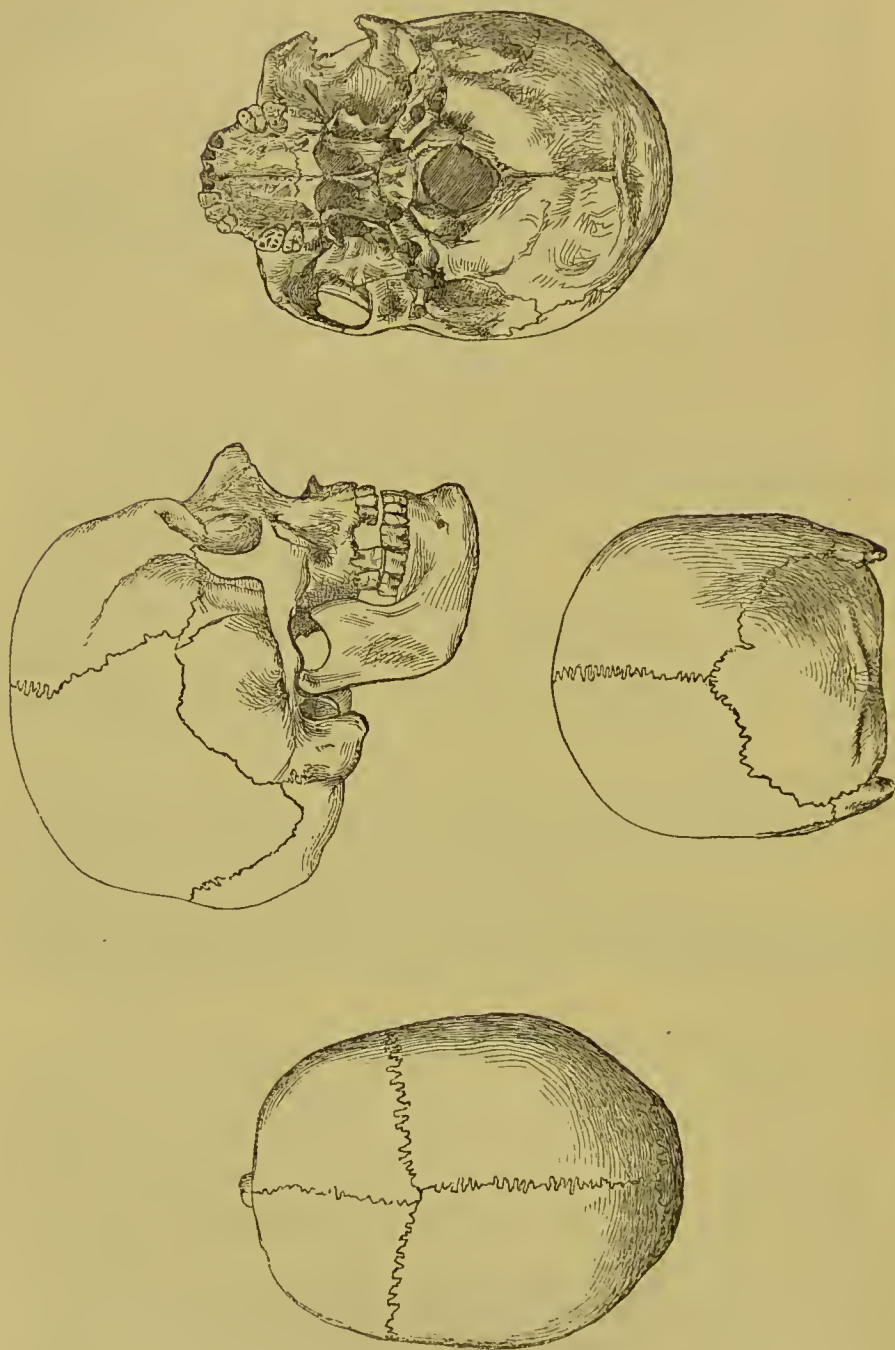
10. 137. Ancient Roman. ♂, æt. c. 40. Calv.

A 80, B 20·8, C 15·2, *a* 4·8, *b* 5·5, *c* 4·9, D 14·7, E 7·4, F 5·4 *t*,
a 4·3, *b* 4·7, *c* 4·3, G 5·6, *a* 4·7, *b* 4·9, *c* 4·2, I 5·4, J·73,
K·75.

A dolichocephalic calvarium from the same source, but evidently more modern.

This series of extraordinarily fine Roman crania, Nos. 128 to 137, are, save the last, of great antiquity, and were met with, in 1853, in excavations made *below the foundations* of one of the Columbaria, on the Via Appia. Hence it is concluded that they belong to the time of the Republic, before the introduction of cremation.

They were obtained through Mr. Jno. FREEBORN and Sig. A. ERCOLE, of Rome.



Figs. 68-71.—Cranium of L. Volusius Secundus.—No. 248.—Quarter-size.

11. 248. Ancient Roman. "Lueius VOLUSIUS SECUNDUS." ♂, æt. e. 60.

A 79, B 21·4, C 15·3, a 5·4, b 5·4, c 4·5, D 15·8, E 7·5, F 5·7_p, a 5·3, b 5·2, c 4·5, G 5·6, a 5·1, b 5, c 4·2, H 5·1, I 5·6, J 7·6, K 7·4.

This very fine skull of an ancient Roman was selected as a good *typical* example to appear in the *Crania Britannica*. It is there figured (Pl. 49) and minutely described, with many additions. It is the cranium of "Lueius VOLUSIUS SECUNDUS," as is shown by the marble slab disinterred with it.

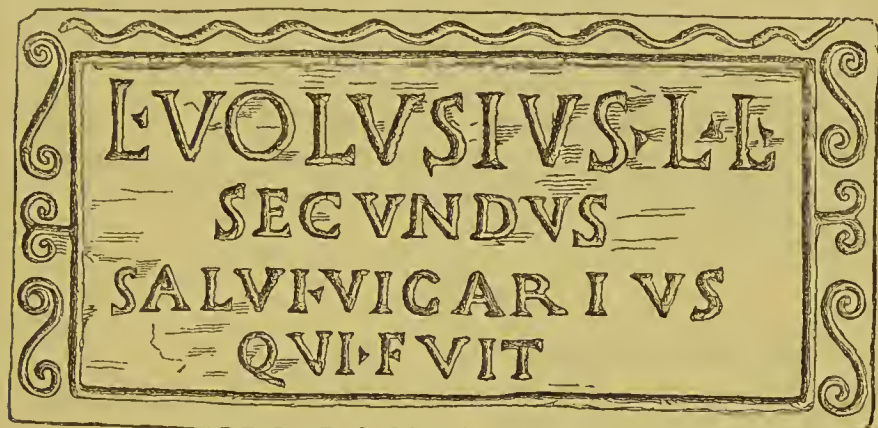


Fig. 72.—Sepulchral Tablet of L. VOLUSIUS SECUNDUS.

Found in a tile tomb on the Via Appia, in 1854, and presented by Mr. Jno. FREEBORN, of Rome.

12. 906. Ancient Roman. ♂, æt. e. 60. Calv. D.C.
B 20·8, C 15·4, D 15·3, E 7·3, F 5·5_p, a 4·6, b 5·2, c 4·5, G 5·6,
a 4·8, b 5, c 4·3, J 7·5, K 7·6.

A large dolichocephalic calvarium from Pompeii, labelled, in the autograph of John HEAVISIDE, "Skull found at Pompeii, in one of the Temples." Purchased at the sale of the Heaviside Museum, August 1829.

13. 1175. Ancient Roman. ♂, æt. e. 65. Calv.
A 87·5, B 21·5, C 15·7, a 5·2, b 5·7, c 4·8, D 15·7, E 7·5, F 5·7_p,
a 4·9, b 5·3, c 4·3, G 5·6, a 5, b 5, c 4, I 5·3, J 7·6, K 7·4.

This fine large Roman calvarium has both the external auditory canals greatly obstructed by nodular exostoses, which must have produced deafness. These aural exostoses have been taken by one observer as a race-character; but this is a mistake.

It was found in a sarcophagus discovered on the *Via Latina*. Presented by the distinguished Prof. MAGGIORANI, through the kind intervention of Dr. G. NICOLUCCI.

*Average Measurements of the Skulls of Eight Ancient Romans,
♂, found in Italy.*

A 75·5, B 21, C 15·1, *a* 5·1, *b* 5·4, *c* 4·7, D 15·1, E 7·3, F 5·6,
a 4·8, *b* 5·1, *c* 4·4, G 5·7, *a* 4·7, *b* 4·8, *c* 4·1, H 4·7, I 5·3,
J 7·6, K 7·4.

Extremes, A 67·5–87·5, J 7·3–81, K 7·0–77.

References.—BLUMENBACH, *Dec. Cran.* Tab. xxxii. Dr. W. F. EDWARDS, *Des Caractères Physiologiques des Races Humaines*, 1829, p. 51. G. SANDIFORT, *Tab. Cran. div. Nat.*, "Cranium Romani." Prof. Carlo MAGGIORANI, *Saggio di Studi Cranio-logici sull' antica stirpe Romana e sulla Etrusca*, Roma, 1858, Tavola. Id. *Nuovo Saggio di Studi Craniologici sull' antica stirpe Romana e sulla Etrusca*, Roma, 1862, 2 Tav. W. VROLIK en J. Van der HOEVEN, *Beschrijving en Afbeelding van eenen te Pompeji opgegraven menschlijken Schedel*, 1859, 2 Plaat, 4to. *Cran. Brit.* Plates 49 &c.

5. Greek.

1. 166. Ancient Greek. ♂, æt. c. 45.

A 68, B 20, C 14·7, *a* 5, *b* 5, *c* 4·7, D 14·5, E 7·2, F 5·2 *p*, *a* 4·4,
b 4·9, *c* 4·2, G 5·5, *a* 4·6, *b* 4·7, *c* 4, H 4·7, I 5, J 7·2, K 7·6.

An elegant cranium of a Greek, in a rare state of completeness, derived from an ancient Greek tomb near Athens. It is tall but dolichocephalic, has a slight supranasal tuberosity and a prominent aquiline nose.

2. 167. Ancient Greek? ♂, of considerable age. Imperf. calv.

B 21·6, C 15·6, *a* 5·6, *b* 5, *c* 5, D 15·1, E 7·6, F 5·9 *p*, *a* 4·8, *b* 5·4,
c 4·5, G 5·4, *a* 4·7, *b* 4·9, *c* 4·4, J 7·7, K 7·1.

A large platycephalic calvarium with great supranasal protuberance and very low forehead, from the same source, but not the same tomb, as No. 166. The form leads to a doubt of its belonging to the same period, if even the same people.

3. 978. Ancient Greek. ♂, æt. c. 60.

D.C.

A 75, B 21, C 14·8, *a* 5, *b* 5·5, *c* 4·3, D 14, E 7·5, F 5·4 *p*, *a* 4·5,
b 4·7, *c* 4·4, G 5, *a* 4·7, *b* 4·6, *c* 4·1, H 4·6, J 7·2, K 6·6.

A dolichocephalic, cylindrocephalic, synostotic cranium. There is no trace of the sagittal suture, of the outer extremities of the coronal, or of those surrounding the great wing of the sphenoid. These sutures are entirely ossified. The remaining (viz. the middle) portions of the coronal, lambdoid, and squamous sutures are also ossified, yet their course may be traced. The right *foramen parietale* is open.

From the Ionian Islands. Presented to DEVILLE by Lord NUGENT, the Governor.

References.—BLUMENBACH, *Dec. Cran.* Tab. li. PRICHARD, *Phys. Res.* 3rd ed. i. fig. 1, "Constantine DEMETRIADES, of Corfu." C. G. CARUS, *Atlas der Cranioscopie*, Heft ii. Taf. v., "Schädel eines Neugriechen," 1845, 4to; *Neuer Atlas*, 1864, fol., Taf. xxiv.; *Ueber altgriechische Schädel aus Gräbern der alten Stadt Cumä*, Breslau, 1857, 4to, Abbildung. Geo. WILLIAMSON, *Obs. on the Hum. Crania in the Mus. of Army Med. Depart.* 1857, p. 9: 26 Greek skulls; 18 ancient and 8 modern. RETZIUS, *Ethnolog. Schriften*, pl. vi. fig. i.

6. Jewish.

1. 1153. Jew. "Esidorus ETERUS." ♂, æt. c. 40. Calv.
A 77, B 19·8, C 14·5, a 4·8, b 5, c 5, D 14·8, E 6·8, F 5·5 t, a 4·6,
b 4·8, c 4·2, G 5·6, a 4·7, b 4·8, c 3·8, I 5·3, J 80, K 82.

A brachycephalie calvarium, with the Jewish nose and rather low forehead.

2. 1154. Jewess. "Amelia ATEA." Æt. e. 7. Imperf. calv.

3. 1155. Jewess. ♀, æt. c. 30. Imperf. calv.

4. 1156. Jewess. ♀, æt. c. 50. Imperf. calv.
B 20·6, E 7·1, F 5·7 p, c 4·4.

The inner table of the right half of the frontal is thickened.

5. 1157. Jew. ♂, æt. e. 60.
B 20·8, C a 4·9, b 5·3, E 7·3, F 5·2 p, G a 4·2, b 4·7, c 4·1, J 71.

6. 1158. Jew. ♂, æt. c. 70–80. Imperf. calv.
C a 4·8, b 5, E 7, F 5·5 p, a 4·7, b 5, J 78.

Has the Jewish nose and low forehead.

These calvaria were discovered in an ancient Jewish cemetery outside the Porta Capena, at Rome, in 1862.

Bulletino dell' Istituto, 1861, p. 98; *Cimitero degli antichi Ebrei scoperto recentemente, illustrato per Raffaele GARRUCCI*, 1862.

b. MODERN RACES.

1. 103. Italian. ♂, æt. e. 30. Calv.
A 78, B 20·7, C 15, a 5·1, b 5, c 4·9, D 14·7, E 7·4, F 5·3 t, a 4·7,
b 4·8, c 4·3, G 5·4, a 4·6, b 4·8, c 4·2, I 5·2, J 71, K 73.

A dolichoccephalie calvarium, derived from a grave in Rome.

2. 852. Italian. ♀, æt. c. 16. Imp. calv. D.C.

"An Italian female, aged 22, cut to show the frontal sinus. From Dr. SPURZHEIM, 1824," DEVILLE's *Catalogue*. The frontal sinus is altogether *wanting*.

3. 948. Italian? ♂, c. 50. Calv. D.C.
A 73, B 20, C 14·8, a 5, b 4·6, c 5·2, D 15·1, E 7·2, F 5·2p, a 4·1,
b 4·8, c 4·3, G 5·5, a 5, b 5, c 4·3, I 5·1, J 7·2, K 7·6.

A narrow, tall, rather heavy dolichocephalic calvarium, having its coronal, sagittal, and almost all its lambdoid sutures obliterated, and small exostoses on the alveoli of the *dentes sapientiæ* on both sides. It is very prognathous. Mr. BUSK's auro-frontal line is 3·8 in., while his auro-alveolar is 4·2 in. The nasals are flat and almost as wide above as below, the aperture of the nostrils being short, wide, and bluntly rounded above, much resembling No. 395 of Dr. WILLIAMSON's *Catalogue*¹.

This calvarium has many of the features of the skull of a *Kafir*, but is said to be that of an Italian, a soldier, who was hanged with the Frenchman (No. 947), at Winchester, for murder. They were presented to DEVILLE together.

4. 996. Italian. "Charles Joseph CANONIERO." ♂, æt. 37. Imp. calv. D.C.

Died 1729. From a burial-place given by JAMES I. to the Parish of St. Martin-in-the-fields, London.

5. *1050. Italian. ♂, æt. c. 50. *Naples*.
A 81, B 21·9, C 16·2, a 5·6, b 5·3, c 5·3, D 14·9, E 8, F 5·5p,
a 4·8, b 5·3, c 4·5, G 5·3, a 4·9, b 4·8, c 4·2, H 4·7, I 5·3,
J 68, K 66.

A large, heavy, narrow, tall, and very dolichocephalic skull of a modern Italian, from Naples. The situation of the frontal suture is occupied by a ridge, which contributes to the unusual length of the occipito-frontal arch. The portions of the coronal suture situated in the temporal regions, the posterior halves of the squamous, and the parieto-mastoid sutures are ossified and entirely effaced. The latter especially are traceless. This fine skull presents a strongly marked instance of the "*condylus tertius* of the occipital" of J. F. MECKEL. It consists of an isolated and distinct subconical process, situated just before the anterior edge of the occipital foramen, in the middle of the basilar portion of the bone, and behind an obvious *tuberculum pharyngeum*. It has an articular surface on its point, which has articulated with the *processus dentatus* of the *epistropheus*. H. J. HALBERTSMA, *De derde Gewrichtsknobbet* (*condylus tertius*) *van het Achter-*

¹ *Observations on the Human Crania at Fort Pitt*, p. 34.

hoofdsbeen. J. Barnard DAVIS, *Dutch Anthropology*, Anthropological Review, iii. 215.

6. 1176. Italian. ♂, æt. c. 60. *Naples*.

A 94, B 22, C 16·3, *a* 4·8, *b* 6·2, *c* 5·3, D 16, E 7·7, F 5·8 *p*, *a* 5, *b* 5·4, *c* 4·6, G 5·3, *a* 5, *b* 5·1, *c* 4·5, H 5, I 5·1, J 7·5, K 68.

This large cranium is thin and slightly affected with *plastic deformation* in the base, about the left condyloid process. Has a frontal suture, which has given rise to great frontal breadth (5 in.), and numerous Wormian ossicles in the course of both limbs of the lambdoid suture, which have promoted the very prominent development of the supraoccipital region. Cheek-depressions very deep.

Dr. NICOLUCCI informs me that this skull represents the predominant type in almost all the Neapolitan provinces.

7. 1177. Italian. ♀, æt. c. 35. *Naples*.

A 72·5, B 19·8, C 13·6, *a* 4·9, *b* 4·4, *c* 4·3, D 14·5, E 6·7, F 5·6 *p*, *a* 4·7, *b* 5·1, *c* 4·2, G 5·2, *a* 4·6, *b* 4·5, *c* 3·7, H 4·6, I 4·8, J 83, K 77.

8. 1178. Italian. ♂, æt. c. 35. *Lucca, Tuscany*.

A 73, B 20·2, C 14·6, *a* 5·4, *b* 5, *c* 4·2, D 14·2, E 7·1, F 5·2 *t*, *a* 4·4, *b* 4·6, *c* 3·6, G 5·1, *a* 4·6, *b* 4·6, *c* 4·1, H 4·7, I 5, J 73, K 71.

On the right side the alisphenoid is cut off from the parietal. The sagittal suture is ossified and wholly obliterated; so are the parieto-mastoid sutures, and the lambdoid nearly so. The effect of this premature synostosis has been, not *scaphocephalism*, but *cylindrocephalism* and slight *kli-nocephalism*. Of this skull the donor is careful to tell me that it is more dolichocephalic than is common in the Tuscan provinces, but that in its general type it approaches the ordinary form.

9. 1179. Italian. ♂, æt. c. 30. *Modena*.

A 81, B 20·4, C 14·1, *a* 4·9, *b* 4·9, *c* 4·3, D 15·4, E 6·9, F 5·8 *t*, *a* 5·1, *b* 5, *c* 4·3, G 5·7, *a* 4·9, *b* 4·9, *c* 3·8, H 4·4, I 5, J 84, K 82.

The posterior two-thirds of the sagittal suture, with that surrounding a large triquetral bone at its termination, are ossified. The result has been shortening of the calvarium and a flattening, almost depression, in the parieto-occipital region.

10. 1180. Italian. ♂, æt. e. 30. *Bologna*.

A 68, B 19·5, C 13·7, *a* 4·7, *b* 4·5, *c* 4·5, D 14·6, E 6·8, F 5·4 *t*, *a* 4·2, *b* 4·9, *c* 4·2, G 5·2, *a* 4·5, *b* 4·6, *c* 3·9, H 4·6, I 5, J 79, K 76.

11. 1181. Italian. ♀, æt. c. 45. *Bologna*.

A 64·5, B 19·2, C 13, *a* 4·7, *b* 4·2, *c* 4·1, D 13·9, E 6·5, F 5·4 *t*,
a 4·6, *b* 4·9, *c* 4·2, G 4·9, *a* 4·4, *b* 4·4, *c* 3·9, H 4·4, I 5·1,
 J ·83, K ·75.

Much of the posterior division of the sagittal suture and of the middle of the lambdoid is obliterated.

12. 1182. Italian. ♂, æt. c. 60. *Turin*.

A 74·5, B 20·8, C 14·2, *a* 5, *b* 4·7, *c* 4·5, D 15, E 6·8, F 5·6 *t*,
a 4·9, *b* 5, *c* 4·3, G 5·6, *a* 4·8, *b* 4·8, *c* 3·8, H 5, I 5·3, J ·82,
 K ·82.

All the middle portion of the lambdoid suture and nearly the whole of the sagittal are completely ossified. The coronal and squamous sutures are partly obliterated. In the occipital region there is a large parieto-occipital flattening, produced by the premature synostoses of this neighbourhood.

13. 1183. Italian. ♂, æt. c. 30. *Turin*.

A 84, B 20·8, C 14·4, *a* 4·9, *b* 5·1, *c* 4·4, D 15·3, E 6·9, F 5·8 *p*,
a 5·1, *b* 5·1, *c* 4·6, G 5·4, *a* 4·9, *b* 4·9, *c* 4·1, H 4·7, I 5·4,
 J ·84, K ·78.

14. 1184. Italian. ♂, æt. 30. *Mountains of Liguria*.

A 76·5, B 19·7, C 14, *a* 5, *b* 4·6, *c* 4·4, D 14·7, E 6·5, F 5·7 *p*,
a 4·8, *b* 5·3, *c* 4·2, G 5·2, *a* 4·4, *b* 4·7, *c* 3·9, H 4·3, I 5·1,
 J ·87, K ·80.

Has a small paramastoid process on the right side. This is the small brachycephalic and delicate skull of a peasant of the mountains of Liguria.

15. 1185. Italian. ♂, æt. c. 40. *Genoa*.

A 75·5, B 20·5, C 13·8, *a* 4·6, *b* 5, *c* 4·2, D 14·5, E 6·8, F 5·9 *p*,
a 5, *b* 5·3, *c* 4·5, G 5·2, *a* 4·7, *b* 4·7, *c* 4, H 4·4, I 5·2, J ·86,
 K ·78.

The sagittal suture is entirely ossified, the lambdoid nearly so, but there is no *scaphocephalism* or other deformity.

Dr. NICOLUCCI has been so good as to acquaint me that the four brachycephalic skulls Nos. 1182, 1183, 1184, and 1185, differing from those from the other Italian provinces, form a particular type, which resembles that of the ancient Ligurians. Crania of these latter people this learned anatomist has described and figured in his memoir entitled "*La Stirpe Ligure in Italia ne' tempi antichi e ne' moderni, Ricerche etnologiche*," *Mem. della R. Accad. delle Sci. di Napoli*, tom. ii. In this elaborate anthropological treatise are contained Tables of Measurements of ancient and modern Ligurian skulls, and, besides the figures of three ancient crania already mentioned, plates of a modern skull of a

mountaineer of Liguria. Dr. NICOLUCCI's excellent work contributes another instance of the close resemblance existing between the types of the very ancient and the modern inhabitants of the same country, which may be said to be a fresh and powerful testimony to permanency of race.

16. 1186. Italian. ♂, æt. e. 70. *Abruzzo Ultra. Calv.*
A 75·5, B 21·1, C 14·8, a 5, b 4·3, c 5·5, D 15·2, E 7·4, F 5·8 t,
a 4·7, b 5·1, c 4·6, G 5·3, a 4·9, b 4·7, c 4, I 5·7, J ·78, K ·71.

A large heavy calvarium with a broad face. Dr. NICOLUCCI says it resembles the actual type of the country.

This calvarium is derived from a cemetery of the 16th century, at the city of Pescino, in Marsico, near the lake Fucino.

The frequency of ossification of the sutures in these Italian skulls is remarkable.

This fine series of Italian skulls, from nearly every province of that country, was contributed by the exertions and kindness of the most distinguished craniologist of the peninsula, Dr. Giustiniano NICOLUCCI.

17. 1314. Italian. ♂, æt. e. 35. "Italian soldier, 1812."
V.L. d. J.
B 21·5, C 16, a 5·3, b 5·3, c 5·4, D 15·5, E 7·3, F 5·9 p, a 5·1, b 5·5,
c 4·8, G 5·8, a 4·9, b 5, c 4·1, H 5·1, I 5·1, J ·80, K ·79.

The membranes of the brain are prepared in this very large brachycephalic skull.

18. 1315. Italian. ♂, æt. c. 40. "Italian soldier, 1812."
V.L. d. J.
A 79, B 20·9, C 14·3, a 5, b 5, c 4·3, D 14·5, E 7·1, F 5·9 t, a 5,
b 5·4, c 4·4, G 5·2, a 4·6, b 4·6, c 3·9, H 4·8, I 5·3, J ·83, K ·73.

Averages of 4 Ligurians, ♂. A 77·6, B 20·4, C 14·1, a 4·9, b 4·8,
c 4·4, D 14·9, E 6·7, F 5·7, a 4·9, b 5·2, c 4·4, G 5·3, a 4·6,
b 4·8, c 3·9, H 4·6, I 5·2, J ·85, K ·79.

Averages of the 7 other authenticated ♂ Italians, excluding No. 948. A 78·6, B 20·8, C 14·9, a 5·1, b 5, c 4·8, D 15,
E 7·3, F 5·5, a 4·7, b 5, c 4·3, G 5·3, a 4·8, b 4·8, c 4·1,
H 4·7, I 5·2, J ·75, K ·73.

Averages of 12 Italian skulls, ♂. A 77·8, B 20·6, C 14·6, a 5,
b 4·9, c 4·7, D 14·9, E 7·1, F 5·5, a 4·7, b 5, c 4·3, G 5·3,
a 4·7, b 4·8, c 4·1, H 4·6, I 5·2, J ·78, K ·75.

Extremes, A 68-94, J ·68-87, K ·66-82. Five of the 12 are brachycephalic. Of these 4 are considered by Signor NICOLUCCI to be Ligurian. The Ligurian peasants about Genoa appeared to Dr. BEDDOE to be notably brachycephalic.

Of two skulls of women, both are brachycephalic.

Referenc.—E. SANDIFORT, *Mus. Anatom.* vol. ii., "Cranium Itali."

E. RACES OF SCANDINAVIA.

1. *Laplanders.*

1. 224. Lapp. ♀, æt. e. 35. *Muoniova*. Calv.
 A 66, B 19·1, C 13·7, *a* 4·5, *b* 4·5, *c* 4·7, D 14·3, E 6·5, F 5·4 *p*,
a 4·6, *b* 5·1, *c* 4·3, G 5·3, *a* 4·3, *b* 4·6, *c* 4·9, I 4·8, J·83, K·81.

A small brachycephalic calvarium, very broad in the parietal region.

Presented by Prof. A. A. RETZIUS, of Stockholm, and labelled in his autograph, "Lapp. Muoniovian. Salomon, 1853."

2. 576. Lapp. ♂, æt. e. 20.
 A 78, B 20·7, C 14·9, *a* 5·3, *b* 4·9, *c* 5, D 15, E 7·1, F 5·9 *p*, *a* 4·8,
b 5·7, *c* 4·6, G 5·6, *a* 4·8, *b* 4·8, *c* 4, H 4·5, I 5·3, J·83, K·78.

Another eminently brachycephalic skull, with great parietal breadth.

Presented by Professor REISSNER, of Dorpat.

3. 668. Lapp. ♀, æt. e. 60. *Utsjoki*.
 A 66, B 19·6, C 13·9, *a* 4·9, *b* 4·6, *c* 4·4, D 14·1, E 6·8, F 5·7 *t*,
a 4·7, *b* 5, *c* 4·1, G 5, *a* 4·4, *b* 4·5, *c* 3·9, H 4·6, I 5, J·83,
 K·73.

A third brachycephalic specimen, which might be described in BLUMENBACH's words, "Calvaria fere globosa"¹. From the Parish of Utsjoki.

Presented by Professor E. J. BONSDORFF, of Helsingfors.

4. 1088. Lapp. ♂, æt. e. 65.
 A 87, B 21·3, C 14·7, *a* 5·2, *b* 4·9, *c* 4·6, D 15·3, E 7·4, F 5·9 *p*, *a* 5,
b 5·2, *c* 4·3, G 5·4, *a* 4·8, *b* 4·9, *c* 4·2, H 4·7, I 5·4, J·79, K·73.

A capacious squarish skull, nearly brachycephalic, with an aquiline nose.

From the collection of Dr. J. C. PRICHARD, to whom it was presented by Prof. A. A. RETZIUS.

Presented by Mr. Augustin PRICHARD.

5. 1144. Lapp. ♂, æt. e. 60. *Paddeby*.
 B 21·3, C 15·5, *a* 5, *b* 5·5, *c* 5; D 15·2, E 7·4, F 5·9 *t*, *a* 4·6, *b* 5·1,
c 4·6, G 5·4, *a* 5·1, *b* 5·1, *c* 4·2, H 4·7, I 5·6, J·79, K·73.

This skull is only just excluded from the brachycephalic series.

The blade of a small iron knife was found in the grave, as in the Anglo-Saxon graves.

¹ *Decas Quinta*, Tab. xliii.

6. 1145. Lapp. ♂, æt. e. 30. *Paddeby*.

A 75·5, B 20·3, C 14·4, *a* 5·1, *b* 4·8, *c* 4·5, D 15·1, E 7, F 5·9 *p*,
a 4·7, *b* 5·6, *c* 4·5, G 5·4, *a* 4·8, *b* 4·9, *c* 4, H 4·4, I 5·3, J 8·4,
 K 77.

This eranium is affected with *hyperostosis* and with *synostosis*. The speno-frontal and speno-parietal sutures are entirely ossified, producing some degree of klinocephalism; and the sagittal and middle portions of the coronal and lambdoid sutures are nearly obliterated, producing pachycephalism. Still the form of the skull is not much changed in any direction.

A ring and other objects were found in the grave.

7. 1146. Lapp. ♂, æt. e. 30. *Thomaselv*.

A 75, B 20·5, C 14·7, *a* 5·2, *b* 4·8, *c* 4·7, D 14·4, E 7·3, F 5·5 *t*,
a 4·4, *b* 4·8, *c* 4·4, G 5·3, *a* 4·8, *b* 4·7, *c* 3·9, H 5, I 5·6, J 7·5,
 K 72.

A synostotic eranium with complete ossification of the sagittal suture alone, producing scaphocephalism. Small parietal foramina present.

8. 1147. Lapp. ♀, æt. e. 70. *Nasseby*. Imperf. calv.

This calvarium has been brachycephalic and broad, and is *posthumously* distorted in a very unusual manner by antero-posterior compression.

9. 1149. Lapp. ♀. *Uren*. Imperf. calv.

B 20·8, C 14·6, *a* 5·3, *b* 4·7, *c* 4·6, D 14·3, E 7·2, F 6 *p*, *a* 4·7,
b 5·3, *c* 4, G 5·3, *a* 4·8, *b* 4·6, *c* 4, J 8·3, K 73.

10. 1150. Lapp. ♂, æt. e. 6. *Karleboten*. Imperf. calv.
 E 6·3, F 5·6 *p*, G 4·6, J 8·8, K 73.

A very brachycephalic calvarium of a boy, I believe, which is of much interest from exhibiting the peculiar characteristics of the race at so early a period of life—just as in BLUMENBACH's three Tables, xxviii., xxix., and xxx.

11. 1151. Lapp. ♀, æt. e. 5. Imperf. calv.

This imperfect calvarium of a girl, I think, is deformed by parieto-occipital flattening towards the right side.

12. 1152. Lapp. ♀, æt. e. 70. *Paddeby*. Imperf. calv.

B 21, C 14·8, *a* 4·8, *b* 4·8, *c* 5·2, D 14·4, E 7·5, F 5·9 *t*, *a* 4·8,
b 5·4, *c* 4·7, G 4·9, *a* 4·5, *b* 4·5, *c* 4·2, J 7·8, K 65.

Nos. 1144 to 1152 from Herre A. G. NORDVI.

The Lapp skulls are from the graves of those who have not been converted to Christianity.

I am also indebted to Herre NORDVI for having taken the pains to ascertain the *stature* of 8 Lapp men and of 3 Lapp women. Of the men, the tallest measured 5 ft. 2·6 in. Engl., the shortest 4 ft. 9·5 in., the average stature being 5 ft. ·3 in. Of the women, the tallest measured 4 ft. 10·1 in., the shortest 4 ft. 7·1 in., the average stature being 4 ft. 8·7 in. And the average of the stature of the whole 11 men and women was 4 ft. 11·3 in. Engl., thus proving them to be a diminutive people.

13. 1316. Lapp. ♂, æt. e. 55. V.L. d. J.
A 73·5, B 21·3, C 14·6, a 4·9, b 5·1, c 4·6, D 14, E 7·3, F 5·7p,
a 5·1, b 5·2, c 4·4, G 4·8, a 4·3, b 4·5, c 4·2, H 4·4, I 4·7,
J ·78, K ·65.

Very platycephalie from plastic deformation.

Average measurements of 5 ♂ Lapp skulls, A 78·8, B 20·8,
C 14·8, a 5·1, b 4·9, c 4·7, D 15, E 7·2, F 5·8, a 4·7, b 5·2,
c 4·4, G 5·4, a 4·8, b 4·8, c 4, H 4·6, I 5·4, J ·80, K ·75.
Extremes, A 75–87, J ·75–84, K ·72–78.

Average measurements of 4 ♀ Lapp skulls, A 66, B 20·1, C 14·2,
a 4·8, b 4·6, c 4·7, D 14·2, E 7, F 5·7, a 4·7, b 5·2, c 4·2,
G 5·1, a 4·5, b 4·8, c 4·2, H 4·6, I 4·9, J ·81, K ·72.
Extremes, J ·78–83, K ·65–81.

Averages of 9 ♂ and ♀ Lapp skulls, A 72·4, B 20·1, C 14·5,
a 4·9, b 4·7, c 4·7, D 14·6, E 7·1, F 5·7, a 4·7, b 5·2, c 4·3,
G 5·2, a 4·6, b 4·8, c 4·1, H 4·6, I 5·1, J ·80, K ·73.

The measurements of Retzius, deduced from 16 genuine Lapp skulls, are these. The greatest length (very much the same as E) 170 mm., or 6·7 in.; greatest breadth, F, 147 mm., or 5·8 in.; and greatest height, G, 129 mm., or 5·1 in. These dimensions give J ·86, and K ·76.

References.—BLUMENBACH, *Dec. Cran. Tab. xliii.* HUECK, *De Craniis Estonum.* Dorpat, 1838, 4to, p. 10, Tab. iii. fig. iii. Augustin PRICHARD, *On the Crania of Laplanders and Finlanders*, Proc. Zool. Soc. pt. xii. 1844. PRICHARD, *Phys. Res.* iii. 298. NILSSON, *Skandinaviska Nordens Urinvånare*, Planchen D. figs. 7, 8, 9, Lapp man and woman. RETZIUS, *Om Formen af Nordboerners Cranier*, 1843. In this work is an accurate description of Lapp skulls, and a comparison of them with those of other modern people. Translated by J. VAN DER HOEVEN, *Over den vorm, &c., Ethnologische Schriften*, 1864, Leipzig, 4to, S. 15, pl. iii. fig. i. MEIGS, *Cat.* p. 50. VAN DER HOEVEN, *Cat.* p. 23. GUERULT, *Mém. de la Soc. d'Anthrop.* i. pl. v. fig. iii.

2. Dane.

913. Dane. ♂, æt. c. 50. Imp. calv. D.C.

B 19·8, C 13·8, a 4·8, b 4·6, c 4·4, D 14·3, E 6·8, F 5·5 *p*, a 4·8, b 5·3, c 4·2, G 5·3, a 4·5, b 4·7, c 3·8, I 5, J 80, K 78.

A brachycephalic calvarium of unknown origin. Presented by Sir Anthony CARLISLE to JOSHUA BROOKES, who has inscribed it, "Old Dane." Bought by DEVILLE at the sale of BROOKES's Museum, March 1, 1830, for £1 2s.

References.—NILSSON, *Skandinaviska Nordens Urinvånare*, Planchen D. figs. 4, 5, 6, Isle of Möcn, with Stone Implements; fig. 10, Ancient Danish. PRICHARD, *Phys. Res.* ed. 3. vol. iii. pl. 3. C. G. CARUS, *Atlas der Cranioscopie*, Taf. vi., "Alt Scandinvier." RETZIUS, *Ethnolog. Schriften*, pl. iii. fig. ii.

3. Swedes.

1. 222. Swede. ♂, æt. c. 50.

A 81, B 20·8, C 15·2, a 5, b 5·2, c 5, D 14·4, E 7·5, F 5·6 *t*, a 4·6, b 4·5, c 4·4, G 5·4, a 4·5, b 4·8, c 4·3, H 4·9, I 5·5, J 74, K 72.

2. 223. Swede. ♀, æt. c. 35.

A 68, B 19·9, C 14·3, a 5, b 4·6, c 4·7, D 13·8, E 7·2, F 5·4 *t*, a 4·4, b 5·1, c 4·3, G 5·2, a 4·4, b 4·5, c 3·9, H 4·3, I 4·9, J 75, K 72.

Two Swedish crania presenting the peculiarities of "long oval form, prominent occipital region, and low parietal tuberosities," so often described by Prof. A. A. RETZIUS.

Presented by Prof. RETZIUS, and labelled, in his autograph, "Succus, ♂, 1854," and "Sueca, ♀, 1854."

3. 1108. Swede. ♂, æt. c. 50.

A 78, B 20·9, C 14·7, a 5, b 5·1, c 4·6, D 14·3, E 7·5, F 5·5 *t*, a 4·7, b 4·9, c 4, G 5·3, a 4·8, b 4·7, c 4·2, H 4·9, I 5·2, J 73, K 70.

Another long narrow skull, exhibiting RETZIUS's characters in a marked degree. The cheek-bones present a large lateral surface, and there is an indication of deformation in a very slight depression running across the fore part of the parietals.

Inscribed, in the autograph of RETZIUS, "1853."

4. 1109. Swede. ♂, æt. c. 50.

A 79, B 20·7, C 15, a 5·2, b 5·3, c 4·5, D 14·9, E 7·3, F 5·5 *p*, a 4·8, b 5·2, c 4·4, G 5·7, a 4·7, b 4·8, c 4·1, H 4·4, I 5·2, J 76, K 78.

Inscribed, in the autograph of RETZIUS, "Succus, 1859."

5. 1110. Swede. ♂, æt. e. 50.
A 78·5, B 20·7, C 14·1, *a* 4·9, *b* 4·8, *c* 4·4, D 14·5, E 7·1, F 5·5 *p*,
a 4·8, *b* 4·9, *c* 4·3, G 5·3, *a* 4·7, *b* 4·7, *c* 4·1, H 4·7, I 5·2,
J 7·7, K 7·4.

6. 1111. Swede. ♀, æt. e. 50.
A 70, B 20, C 14·3, *a* 5, *b* 4·6, *c* 4·7, D 13·6, E 7, F 5·4 *t*, *a* 4·7,
b 4·7, *c* 4·2, G 5, *a* 4·4, *b* 4·4, *c* 3·9, H 4·4, I 4·8, J 7·7, K 7·1.

7. 1112. Swede. ♂, æt. e. 50.
A 79, B 20·8, C 15·3, *a* 5·3, *b* 4·9, *c* 5·1, D 14·8, E 7·4, F 5·4 *p*, *a* 4·7,
b 5·2, *c* 4·4, G 5·7, *a* 4·7, *b* 4·8, *c* 4·2, H 4·9, I 5·1, J 7·3, K 7·7.

Inscribed, in the autograph of RETZIUS, "1857."

Two of these Swedish skulls present a Polynesian peculiarity;
1109 and 1112 are higher than broad.

8. 1113. Swede. ♀, æt. c. 40. Calv.
A 76, B 20·1, C 14·5, *a* 5, *b* 5, *c* 4·5, D 14, E 7·1, F 5·5 *p*, *a* 4·7,
b 5·1, *c* 4·2, G 5·1, *a* 4·2, *b* 4·6, *c* 4·2, I 5, J 7·7, K 7·1.

9. 1114. Swede. ♂, æt. e. 60. Calv.
A 82, B 21·2, C 14·9, *a* 5, *b* 4·5, *c* 5·4, D 15·1, E 7·4, F 5·8 *t*, *a* 4·9,
b 5·2, *c* 4·5, G 5·4, *a* 4·7, *b* 4·9, *c* 4·4, I 5·5, J 7·8, K 7·3.

10. 1115. Swede. ♂, æt. e. 70. Calv.
A 82, B 20·9, C 15, *a* 5, D 14·4, E 7·2, F 5·6 *t*, *a* 5, *b* 5·1, *c* 4·3,
G 5·4, *a* 4·4, *b* 4·6, *c* 3·7, I 5·3, J 7·7, K 7·5.

The tuberosity of the occipital is converted into a spine ·6 in.
long; the lambdoid suture is obliterated, whilst the frontal
persists. Like 1108 it presents a slight degree of *annular* deformation.

11. 1116. Swede. ♂, æt. e. 60. Calv.
A 76, B 21·2, C 15·1, *a* 5·2, *b* 5·1, *c* 4·8, E 7·4, F 5·7 *t*, *a* 5, *b* 4·9,
c 4·4, G 5·5, *a* 4·8, *b* 4·7, *c* 4·2, J 7·7, K 7·4.

Inscribed, in the autograph of RETZIUS, "Succus."

12. 1117. Swede. ♂, æt. e. 70. Calv.
A 81, B 21, C 14·9, *a* 4·9, *b* 4·9, *c* 5·1, D 14·8, E 7·2, F 5·7 *t*, *a* 4·8,
b 5·3, *c* 4·4, G 5·4, *a* 4·6, *b* 4·9, *c* 4·2, I 5·5, J 7·9, K 7·5.

Nos. 1108 to 1112 are erania of Swedish peasants from the anatomical theatre of the Carolinska Institute, prepared by Prof. A. RETZIUS, 1840-60; No. 1113 from a modern grave; and Nos. 1114 to 1117 from a medieval grave at Stockholm.

Nos. 1108 to 1117 from the collection of Prof. A. A. RETZIUS.
Presented by Prof. Von DÜBEN and Herre M. Gustaf RETZIUS,
Candidatus Med. et Phil.

13. 1317. Dalecarlian. "HANS LARSSARROW." ♂, æt. c. 50.
V.L. d. J.

A 78, B 20·8, C 14·6, *a* 5, *b* 5·1, *c* 4·5, D 14·3, E 7·3, F 5·5 *p*, *a* 4·5,
b 4·9, *c* 4·5, G 5·1, *a* 4·6, *b* 4·6, *c* 4, H 4·9, I 5, J ·75, K ·70.

Died at Stockholm.

Average measurements of 9 ♂ Swedish skulls, A 79·6, B 20·9,
C 14·9, *a* 5, *b* 5, *c* 4·8, D 14·6, E 7·3, F 5·5, *a* 4·8, *b* 5, *c* 4·3,
G 5·4, *a* 4·6, *b* 4·7, *c* 4·1, H 4·7, I 5·3, J ·75, K ·74.

Extremes, A 76–82, J ·73–79, K ·70–78.

All are dolichocephalie. So also are the 7 Swedish skulls in VAN DER HOEVEN's *Catalogus*. In these J and K are both ·72. The results of Retzius's measurements are E 190 millims. or 7·5 in., F 147 millims. or 5·8 in., and G 135 millims. or 5·3 in., affording the ratios J·77, and K·70.

Average measurements of 3 ♀ Swedish skulls, A 71·3, B 20,
C 14·3, *a* 5, *b* 4·7, *c* 4·6, D 13·8, E 7·1, F 5·4, *a* 4·6, *b* 4·9,
c 4·2, G 5·1, *a* 4·3, *b* 4·5, *c* 4·1, H 4·6, I 4·9, J ·76, K ·71.

Extremes, A 68–76, J ·75–77, K ·71–72.

Averages of 12 Swedish skulls, ♂ and ♀, A 75·4, B 20·4, C 14·6,
a 5, *b* 4·8, *c* 4·7, D 14·2, E 7·2, F 5·4, *a* 4·7, *b* 4·9, *c* 4·2,
G 5·2, *a* 4·4, *b* 4·6, *c* 4·1, H 4·6, I 5·1, J ·75, K ·72.

References.—E. SANDIFORT, *Mus. Anatom.* vol. ii., "Cranium Sueci." S. NILSSON, *Skandinaviska Nordens Urinvånare*, Christianstad, 1838, Planchen D. figs. 1, 2, 3. RETZIUS, *Om Formen*, V. D. HOEVEN's transl. S. 8. Id. *Blick*. Id. *Ethnol. Schriften*, S. 4, pl. i. figs. i., ii., pl. v. figs. i., ii. Baron Gustaf von DÜBEN, *Konung Karl den Tolfte Dödssätt*, Stockholm, 1860, 4to, Planch. 3, 4. K. E. VON BAER, *Bericht über die Zusammenkunft einiger Anthropologen in Göttingen*, Leipzig, 1861, 4to, Taf. ii., "Schwede aus Finland" (this is a well-selected example of a Swedish skull). MEIGS, *Catalogue*, p. 19. V. D. HOEVEN, *Catalogus*, p. 11. T. de PAULY, *Descrip. Ethnogr. des Peuples de la Russie*, St. Petersburg, 1862, fol., pl. "Principaux types craniologiques," par V. BAER: "Suédois." W. VROLIK, *Catalogue*, p. 15.

F. RACES OF THE NETHERLANDS.

a. ANCIENT RACES OF THE NETHERLANDS.

1. 1318. Ancient Roman. ♂, æt. c. 60. V.L. d. J.

A 78, B 20·8, C 14, *a* 4·9, *b* 5·1, *c* 4, D 13·8, E 7·1, F 5·7 *t*, *a* 4·7,
b 4·9, *c* 4·4, G 5, *a* 4·3, *b* 4·4, *c* 4·1, H 4·8, I 5·2, J ·80, K ·70.

2. 1319. Ancient Roman. ♂, æt. c. 20. Calv. V.L. d. J.
A 71, B 19·8, C 13·7, *a* 4·8, *b* 4·7, *c* 4·2, D 14·2, E 6·7, F 5·5 *p*,
a 4·3, *b* 4·8, *c* 4·4, G 4·9, *a* 4·4, *b* 4·5, *c* 3·9, I 5, J 82, K 73.

Disinterred near Utrecht, between the villages of Bunnik and Vegten, at a place which was formerly a Roman *Castrum*, now a manor. Many skeletons have been found in this spot, accompanied by Roman coins.

b. MODERN RACES OF THE NETHERLANDS.

1. Dutch.

1. 93. Dutch. *Frieslander* from Hindelopen. ♂, æt. c. 40.
Imp. calv.

B 20·5, C 14·7, *a* 5·1, *b* 5, *c* 4·6, D 15, E 7·2, F 5·8 *p*, *a* 5·3, *b* 5·5,
c 4·3, G 5·3, *a* 4·8, *b* 4·8, *c* 3·9, J 80, K 73.

2. 321. Dutch. *Frieslander* of Bolsward. ♂, æt. 55.
A 88, B 21·4, D 15·4, *a* 5·4, *b* 5, *c* 5, D 15·5, E 7·4, F 6·2 *p*, *a* 5,
b 6, *c* 4·6, G 5·4, *a* 4·8, *b* 4·9, *c* 4·3, H 4·7, I 5·3, J 83, K 73.

A brachycephalic skull with unusually prominent parietal tubers, so as to convert the *norma verticalis* into a pentagonal form.

Presented by the distinguished Professor J. VAN DER HOEVEN, of Leyden, September 1856.

3. 325. Dutch. *East Frieslander* of Embden. ♀, æt. c. 30.
A 82, B 20·4, C 13·9, *a* 5, *b* 4·5, *c* 4·4, D 14·6, E 7·2, F 5·8 *p*, *a* 4·7,
b 5·3, *c* 4·6, G 5·6, *a* 4·6, *b* 4·7, *c* 4, H 4·5, I 5·3, J 80, K 77.

A globular brachycephalic cranium.

From the collection of Prof. M. N.-C. DE FREMERY, of Utrecht.

4. 365. Dutch. *Frieslander* from Hindelopen. ♂, æt. 60.
A 87, B 21·6, C 15·6, *a* 5·3, *b* 5·6, *c* 4·7, D 15·7, E 7·5, F 6·2 *t*,
a 5·2, *b* 5·3, *c* 4·8, G 5·5, *a* 4·7, *b* 5, *c* 4·3, H 4·8, I 5·1, J 82,
K 73.

5. 744. Dutch. "J. A. MONTIS," *Frieslander*. ♂, æt. 44.
A 76, B 20·4, C 14·9, *a* 4·9, *b* 5·2, *c* 4·8, D 14·5, E 7·3, F 5·1 *t*,
a 4·6, *b* 4·9, *c* 4·6, G 5·4, *a* 4·4, *b* 4·7, *c* 4·3, H 4·9, I 5·1,
J 69, K 74.

6. 745. Dutch. "D. K. BOERSMA," *Frieslander*. ♂, æt. 47.
A 72, B 20·4, C 14·4, *a* 5·1, *b* 4·9, *c* 4·4, D 14·2, E 7·2, F 5·5 *t*, *a* 4·6,
b 5, *c* 4·4, G 5·4, *a* 4·5, *b* 4·6, *c* 4, H 4·9, I 5·5, J 76, K 75.

7. 360. Dutch. Prov. of *Groningen*. ♂, æt. 59.

B 21·5, C 15, *a* 5·1, *b* 5·2, *c* 4·7, D 15, E 7·5, F 6·2 *p*, *a* 4·9, *b* 5·6, *c* 4·9, G 5·2, *a* 4·6, *b* 4·7, *c* 4, H 5·4, I 5·8, J·82, K·69.

Skull of a suicide, who hanged himself.

8. 743. Dutch. "J. VOLKERS," from Prov. of *Groningen*. ♂, æt. e. 45.

A 72, B 20·3, C 14·1, *a* 5, *b* 5, *c* 4·1, D 15, E 7, F 5·8 *t*, *a* 4·9, *b* 5·1, *c* 4·7, G 5·1, *a* 4·5, *b* 4·6, *c* 3·9, H 5, I 5·2, J·82, K·72.

9. 748. Dutch. "J. KORSTMAN," from Prov. of *Noord Holland*. ♂, æt. 53.

B 20·1, C 14, *a* 4·6, *b* 4·8, *c* 4·6, D 14·1, E 6·7, F 5·7 *t*, *a* 4·7, *b* 5·1, *c* 4·5, G 4·9, *a* 4·3, *b* 4·6, *c* 4·2, H 4·7, I 5·2, J·85, K·73.

10. 327. Dutch. *Amsterdam*. ♂, æt. c. 50.

A 77, B 20·3, C 14·4, *a* 5·5, *b* 4·7, *c* 4·2, D 15, E 6·9, F 5·8 *t*, *a* 5, *b* 5·2, *c* 4·6, G 5·3, *a* 4·9, *b* 4·8, *c* 3·8, H 5·4, I 5·5, J·84, K·76.

This very brachycephalie tall skull, with an aquiline nose and a long face, has a frontal suture.

11. 366. Dutch. *Amsterdam*. Fishwife. ♀, æt. 57.

A 67, B 20·1, C 13·6, *a* 4·7, *b* 4·1, *c* 4·8, D 14, E 6·9, F 5·5 *p*, *a* 4·5, *b* 4·9, *c* 4·5, G 5, *a* 4·1, *b* 4·5, *c* 4·2, H 4·5, I 4·8, J·79, K·72.

A small, low, prognathous skull of an *Amsterdam poissarde*.

12. 749. Dutch. *Amsterdam*. ♂, æt. e. 35.

A 87, B 21, C 14·8, *a* 5, *b* 5, *c* 4·8, D 15·4, E 7·2, F 5·9 *t*, *a* 4·7, *b* 5·5, *c* 4·4, G 5·7, *a* 4·5, *b* 4·9, *c* 4·4, H 5, I 5·3, J·82, K·79.

This peculiar brachycephalie thin skull, which has a flat, low frontal bone and an unusual intertemporal diameter, bears marks of *artificial deformation*, in a depressed groove, about an inch wide, across the fore part of the parietals, following the course of the coronal suture.

13. 753. Dutch. *Amsterdam*. ♂, æt. c. 60. Calv.

A 87, B 21·5, C 15·3, *a* 5·2, *b* 5·1, *c* 5, D 15·5, E 7·5, F 6 *t*, *a* 5, *b* 5·1, *c* 4·5, G 5·4, *a* 4·9, *b* 4·9, *c* 4·4, J·80, K·72.

A large, regular platycephalie calvarium.

14. 754. Dutch. *Amsterdam*. ♂, æt. e. 60. Calv.

A 79, B 20·9, C 15, *a* 5·3, *b* 5, *c* 4·7, D 15·1, E 7·3, F 5·1 *p*, *a* 4·7, *b* 5·3, *c* 4·3, G 5·4, *a* 4·7, *b* 4·8, *c* 4·1, I 5, J·69, K·74.

15. 755. Dutch. *Amsterdam*. ♀, æt. c. 25. Calv.

A 67, B 19·7, C 14·1, *a* 4·9, *b* 4·7, *c* 4·5, D 13·8, E 6·9, F 5·3 *t*, *a* 4·5, *b* 4·9, *c* 4·3, G 5, *a* 4·4, *b* 4·5, *c* 4, I 5, J·76, K·72.

16. 756. Dutch. *Amsterdam*. ♀, æt. c. 40. Calv.
B 20·6, C 14·4, *a* 5·1, *b* 4·6, *c* 4·7, D 14·3, E 7·2, F 5·8 *p*, *a* 4·7,
b 5·5, *c* 4·4, G 5·1, *a* 4·5, *b* 4·5, *c* 4·1, I 5, J ·80, K ·70.

A supernumerary tooth is projecting through the anterior palatine foramen.

17. 757. Dutch. *Amsterdam*. ♀, æt. c. 40. Calv.
A 70, B 19·8, C 14·3, *a* 5·1, *b* 4·8, *c* 4·4, D 14·6, E 7, F 5·5 *p*,
a 4·6, *b* 5·3, *c* 4·3, G 5·3, *a* 4·5, *b* 4·7, *c* 4, I 4·6, J ·78, K ·75.

Nos. 753 to 757 are derived from the cemetery of an old monastery.

18. 367. Dutch. ♂, æt. c. 18.
A 72·5, B 20, C 14·1, *a* 4·9, *b* 5, *c* 4·2, D 14·2, E 6·9, F 5·5 *p*, *a* 4·7,
b 5·1, *c* 4·4, G 5·4, *a* 4·5, *b* 4·7, *c* 4, H 4·6, I 5·2, J ·79, K ·78.

19. 369. Dutch. ♀, æt. c. 60.
A 88, B 22, C 15·7, *a* 5·4, *b* 5·2, *c* 5·1, D 15·6, E 7·5, F 6·2 *p*; *a* 5·4,
b 5·9, *c* 4·4, G 5·4, *a* 4·9, *b* 5·1, *c* 4·5, H 4·2, I 5, J ·82, K ·72.

Has a very large calvarium with frontal suture, and a face distinguished for smallness. Probably hydrocephalic in youth.

20. 363. Dutch. From Prov. of *Gelderland*. ♀, æt. 39.
A 67, B 20·6, C 14, *a* 4·9, *b* 4·7, *c* 4·4, D 13·4, E 7·3, F 5·6 *p*,
a 4·6, *b* 4·9, *c* 4·4, G 4·7, *a* 4·2, *b* 4·4, *c* 4·4, H 4·4, I 4·9,
J ·76, K ·64.

Very flat, and has a frontal suture.

21. 368. Dutch. From Prov. of *Gelderland*. ♂, æt. 60.
A 82, B 21·2, C 15·1, *a* 4·9, *b* 5·1, *c* 5·1, D 14·9, E 7·4, F 5·8 *t*,
a 4·9, *b* 5·1, *c* 4·7, G 5·5, *a* 4·6, *b* 4·8, *c* 4·5, H 4·4, I 5·3,
J ·78, K ·74.

22. 746. Dutch. "F. J. GERRITSON." Prov. of *Gelderland*.
♂, æt. 50.

A 76, B 20·4, C 14·9, *a* 5, *b* 5, *c* 4·9, D 15·1, E 7·1, F 5·5 *p*, *a* 4·7,
b 5·4, *c* 4·4, G 5·4, *a* 4·5, *b* 4·9, *c* 4·3, H 4·5, I 5, J ·77, K ·76.

Has a frontal suture.

23. 747. Dutch. "C. HOUMELING." Prov. of *Gelderland*.
♂, æt. 45.

A 81, B 20·6, C 15·5, *a* 5·4, *b* 5·6, *c* 4·5, D 15, E 7·1, F 5·6 *t*,
a 4·8, *b* 5·2, *c* 4·2, G 5, H 4·6, I 5·1, J ·78, K ·70.

A very thin skull, affected with plastic deformation in the basal region.

24. 1320. Dutch. *Zeeland*. ♂, æt. e. 35. V.L. d. J.

A 73, B 19·9, C 13·8, *a* 4·6, *b* 4·8, *c* 4·4, D 14·3, E 6·6, F 5·7_p,
a 4·8, *b* 5·2, *c* 4·3, G 5·1, *a* 4·4, *b* 4·6, *c* 3·9, H 4·4, I 5, J 86,
 K 77.

The teeth indicate the use of the pipe on the right side of the mouth. A small process in the middle of the anterior edge of the occipital foramen, which has articulated with the body of the atlas, affords a good example of the *condylus tertius* of J. F. MECKEL. It does not entirely agree with any of the forms depicted by Prof. HALBERTSMA. It is quite distinct and azygous, the articular surface being on the posterior part of its point. This skull presents the oblique occiput, which the latter attributes chiefly to Javans, in any considerable degree. The measurement of HALBERTSMA's oblique lines gives —152 millims. and +166, showing an excess of +14 millims., a difference which is exceeded by one case only in the table given by this author of the measures of 125 very Javan skulls. It is singular that this great obliquity from parieto-occipital compression should occur in a Dutch skull, in a case in which sleeping on the bare earth, the probable cause to which Prof. HALBERTSMA attributes the deformation, does not apply. H. J. HALBERTSMA, *De derde gewrichtsknobbel (condylus tertius) van het achterhoofdsbeen*. Id. *De asymmetrie der Javaansche Schedels*. There is a Wormian bone in the left limb of the lambdoid suture.

25. 1321. Dutch. ♂, æt. e. 35. *Holland, Amsterdam*. V.L. d. J.

A 64, B 19·5, C 13·9, *a* 4·6, *b* 5, *c* 4·3, D 13·4, E 6·8, F 5·3_p,
a 4·3, *b* 4·9, *c* 4, G 5·2, *a* 4, *b* 4·3, *c* 3·7, H 3·9, I 4·7, J 77,
 K 76.

“Onzinnige.” The skull of a congenital *idiot*. The two lower middle incisors have been lost in early life. The alisphenoids are cut off from the parietals; a pitheoid form.

26. 1322.* Dutch. ♂, æt. e. 25.

V.L. d. J.

A 87, B 21, C 15·2, *a* 5, *b* 5·7, *c* 4·5, D 15·2, E 7·3, F 5·8_t, *a* 5,
b 5·1, *c* 4·5, G 5·7, *a* 4·9, *b* 4·9, *c* 3·9, H 4·8, I 5·8, J 79, K 78.

The speno-parietal suture is short in this remarkably fine and perfect skull.

27. 1323. Dutch. *Holland*. ♀, æt. e. 35.

V.L. d. J.

A 70, B 19·8, C 14, *a* 4·7, *b* 4·8, *c* 4·5, D 14·6, E 6·8, F 5·5_p,
a 4·4, *b* 5·1, *c* 4·2, G 5·3, *a* 4·5, *b* 4·6, *c* 3·9, H 4·7, I 5, J 80,
 K 77.

The posterior two-thirds of the sagittal suture are wholly ossified, without any deformation; both parietal foramina very obvious; the other sutures quite open.

28. 1324. Dutch. *Guelderland*. ♀, æt. 106. V.L.d.J.
 A 66, B 20·7, C 14·5, *a* 4·7, *b* 5·3, *c* 4·5, D 13·5, E 7·3, F 5·4*p*,
a 4·5, *b* 5·2, *c* 4·4, G 4·8, *a* 4, *b* 4·4, *c* 4·4, H 3, I 4·9, J 7·4,
 K 65.

The edentulous alveoli of both maxillæ are entirely absorbed, so that the body of the lower jaw is reduced to a segment of a circle, or ring of bone, and the upper is brought to a level with the bony palate. The entire skull is very thin,—the atrophy of extreme age. The sutures are quite open, the speno-parietals being very short. The skull has undergone *plastic deformation* from atrophy, by which it has acquired a long, low, discoidal form. There is a depression running across the frontal, immediately before the coronal suture, which has no serrations at this part. The weight is 18 ounces.

29. 1325. Dutch. *Guelderland*. ♂, æt. 107. V.L.d.J.
 A 81, B 20·5, C 14·5, *a* 4·7, *b* 5·1, *c* 4·7, D 15, E 6·9, F 5·8*t*, *a* 4·8,
b 5·3, *c* 4·6, G 5·5, *a* 4·6, *b* 4·9, *c* 4, H 3·5, I 5·5, J 8·4, K 7·9.

Another edentulous skull of a *vetulus*, with the jaws reduced to the same state as in the preceding, but not exhibiting other signs of atrophy. The sutures are open, except a small part of the sagittal, and about an inch of each extremity of the coronal, which are ossified. The lower jaw is attached by its ligaments. Weighs 23·5 ounces.

30. 1326. Dutch. *Utrecht*. ♀, æt. 110. V.L.d.J.
 A 66, B 20, C 13·8, *a* 4·8, *b* 4·8, *c* 4·2, D 13·5, E 6·8, F 5·5*p*, *a* 4·7,
b 5, *c* 4·4, G 4·7, *a* 4·2, *b* 4·3, *c* 4·1, H 3, I 4·6, J 8·0, K 6·9.

This skull, although of so aged a woman, has a patent frontal suture, only ossified for about an inch of its extent near the lower extremity. The same is the case with the outer extremities of the coronal. The wasting of the alveoli and maxillæ is even more complete than in the two precedent skulls. Has acquired a discoid form from *plastic deformation*, the result of senile atrophy. Weighs only 15 ounces.

31. 1327. Dutch. *Guelderland*. ♂, æt. 112. V.L.d.J.
 A 75·5, B 20·5, C 14·3, *a* 4·8, *b* 4·9, *c* 4·6, D 14·6, E 7, F 5·8*p*, *a* 4·6,
b 5, *c* 4·8, G 5·2, *a* 4·4, *b* 4·6, *c* 4·2, H 3·6, I 5·4, J 8·2, K 7·4.

The maxillary atrophy has proceeded to an extreme degree; yet the sutures are all open, save the outer ends of the coronal. Lower jaw still attached by its ligaments. Weighs 24 ounces.

32. 1327*a*. Lower jaw of an extremely aged person. V.L.d.J.
 These four erania exhibit the changes of extreme senectitude in a striking manner. They are well authenticated examples,

their ages being ascertained, and were no doubt known when living to Professor VAN LIDTH DE JEUDE, who has prepared them, retaining the ligaments; hence they are of much value. It is probable that other skulls in this Collection may have appertained to equally old persons, particularly No. 26, CHINESE skull, from Amoy; but we have no means of determining their exact age.

Considerable diversity, as may be seen by the measurements, is exhibited in this series of 30 skulls of people of the Netherlands, 20 of which are those of men, and 10 those of women. In size they are large. Those of the men vary from 72 ounces to 88 ounces of capacity, giving an average of 79·9 ounces; and those of the women (excluding No. 369) from 67 ounces to 82 ounces, the mean being 70·6 ounces. Of the 30 crania, 17 are brachycephalic and 13 dolichocephalic. Of the former No. 327 is undistinguishable from a Russian skull. No. 321, by its prominent parietal tubers, tends to the Kanaka form, but it has not the flat occiput nor the depressed nasals. Nos. 360 and 753 are platycephalic, and present the typical Teutonic form.

Average Measurements of Netherland Skulls.

Average measurements of 5 Frisian ♂ skulls, A 80·7, B 20·8, C 15, *a* 5·1, *b* 5·1, *c* 4·7, D 15, E 7·3, F 5·7, *a* 4·9, *b* 5·3, *c* 4·5, G 5·4, *a* 4·6, *b* 4·8, *c* 4·1, H 4·8, I 5·2, J 7·8, K 7·3.

Average measurements of 5 Amsterdammer ♂ skulls, A 80·5, B 20·7, C 14·8, *a* 5·1, *b* 5, *c* 4·6, D 14·9, E 7·2, F 5·7, *a* 4·8, *b* 5·3, *c* 4·6, G 5·3, *a* 4·6, *b* 4·8, *c* 4·2, H 4·8, I 5·2, J 7·9, K 7·4.

Average measurements of 17 Netherland ♂ skulls, A 79·9, B 20·7, C 14·7, *a* 5, *b* 5, *c* 4·6, D 14·9, E 7·1, F 5·7, *a* 4·8, *b* 5·2, *c* 4·5, G 5·3, *a* 4·6, *b* 4·7, *c* 4·1, H 4·6, I 5·3, J 8·0, K 7·4.

Extremes, A 72–88, J 69–86, K 69–79.

Average measurements of 6 Netherland ♀ skulls, A 70·6, B 20·2, C 13·9, *a* 4·9, *b* 4·5, *c* 4·6, D 14·1, E 7, F 5·5, *a* 4·6, *b* 5·1, *c* 4·4, G 5·1, *a* 4·4, *b* 4·5, *c* 4·1, H 4·5, I 4·9, J 7·8, K 7·2.

Extremes, A 67–82, J 76–80, K 64–77.

Averages of 23 Netherland skulls, ♂ and ♀, A 75·2, B 20·7, C 14·3, *a* 4·9, *b* 4·7, *c* 4·6, D 14·5, E 7, F 5·6, *a* 4·7, *b* 5·1, *c* 4·4, G 5·3, *a* 4·5, *b* 4·6, *c* 4·1, H 4·5, I 5·1, J 8·0, K 7·5.

VAN DER HOEVEN's measurements apply to 3 Frieslanders and 4 natives of Urk and Schokland, islands in the Zuyder Zee. The former give J 77, K 74; the latter J 78, K 73: *Catalogus*, p. 14. Dr. D. LUBACH gives these results from the measurement of 20 skulls of Nederlanders:—Length 184 mm. or 7·3 in., breadth 138 mm. or 5·4 in., and height 137 mm. or 5·4 in., *i. e.*

J·75, K·74: *Grondtrekken eener Ethnologie van Nederland*, Haarlem, 1861, 8vo, S. 421, pl. v., figures of two Netherland skulls. Dr. WELCKER obtains J·75, K·71, from 24 examples, *Kraniol. Mittheil.* S. 154; whilst, on the other hand, Dr. SASSE, from 50 crania of Dutch of Zaandam, deduces the mean of J·80, from 18 of Rijp J·81, and from 11 of Broek J·79, which agree closely with the results of our observations. The latter treats the subject of the cephalic index of Dutch skulls at some length.

References.—BLUMENBACH, *Dec. Cran.* Tab. lxiii. MEIGS, *Cat.* p. 23, No. 434, the largest skull in MORTON'S collection. WILLEM VROLIK, *Catalogue*, p. 11. Dr. A. SASSE, *Van der Schedelvorm der Nederlanders*, 1865.

2. Jews.

1. 1328. Jew. *Holland, Amsterdam.* ♂, æt. 58. V.L.d.J. A 79·5, B 21·2, C 15, *a* 5·2, *b* 5, *c* 4·8, D 14·5, E 7·5, F 5·5*p*, *a* 4·8, *b* 4·8, *c* 4·3, G 5, *a* 4·7, *b* 4·6, *c* 4·2, H 4·9, I 5·2, J·73, K·66.

The sagittal suture is entirely effaced, as well as those surrounding the alisphenoids. The coronal, lambdoid, and other sutures are ossified, but not quite obliterated. The parietal foramina are both open. The extreme length of the calvarium depends on these synostoses.

2. 1329. Jew. *Holland.* ♂, æt. c. 40. V.L.d.J. A 80, B 20·9, C 14·9, *a* 5·2, *b* 5·2, *c* 4·5, D 14·4, E 7·1, F 5·7*p*, *a* 4·9, *b* 5·2, *c* 4·6, G 5, *a* 4·6, *b* 4·7, *c* 4, H 4·5, I 5, J·80, K·70.

This is a very fine and rare specimen. The mastoid sutures are ossified.

3. 1330. Jewess. *Holland.* ♀, æt. c. 22. V.L.d.J. B 19·2, C 13·7, *a* 4·7, *b* 4·5, *c* 4·5, D 12·5, E 6·9, F 5·1*t*, *a* 4·2, *b* 4·5, *c* 4, G 5, *a* 4·1, *b* 4·3, *c* 3·8, H 4·4, I 4·6, J·74, K·72.

Small, rather thick skull of a young Jewess, with a remarkably narrow face, which is prognathous. Has the membranes of the brain prepared.

References.—M. J. WEBER, *Ur- u. Racen-Formen der Schädel u. Becken*, 1830, 4to, Tab. v. Gottfried SEADOW, *National-Physiognomien*, Berlin, 1835, fol., pl. x., "Ebreo." G. SANDIFORT, *Tab. Cran.*, "Cranium Judæi." W. VROLIK, *Catalogue de la Collection d'Anatomie*, p. 27, where six skulls of Jews are described.

G. RACES OF GERMANY.

a. *Holsteiner*.

362. Holsteiner. ♂, æt. 46.

A 76, B 21·2, C 15·1, *a* 5, *b* 5·4, *c* 4·7, D 14·7, E 7·4, F 5·5 *p*, *a* 4·6, *b* 5, *c* 4·5, G 5·1, *a* 4·5, *b* 4·5, *c* 4·4, H 5·2, I 5·2, J 7·4, K 69.

The nasal bones are quite unsymmetrical, being twisted to the right; there is a small exostosis on the frontal near the right temple, and the outer portions of the coronal, the sphenofrontal, and -parietal sutures are ossified.

b. *Hanoverians*.

1. 361. Hanoverian. ♂, æt. c. 60.

A 84, B 21·3, C 15·3, *a* 4·8, *b* 5·4, *c* 5·1, D 15·2, E 7·3, F 5·9 *p*, *a* 4·9, *b* 5·2, *c* 4·6, G 5·5, *a* 4·6, *b* 4·8, *c* 4·4, H 5·2, I 5·4, J 80, K 75.

2. 750. Hanoverian. "C. L. SCHMEIGER." ♂, æt. 43.

A 82·5, B 21·8, C 14·9, *a* 4·6, *b* 5, *c* 5·3, D 15·2, E 7·4, F 6 *p*, *a* 5, *b* 5·3, *c* 4·5, G 5·4, *a* 4·5, *b* 4·8, *c* 4·7, H 5·3, I 5·5, J 81, K 73.

Reference.—E. SANDIFORT, *Mus. Anatom.* vol. ii., "Cranium Feminae Hanoverianac."

c. *Hessians*.

1. 1331. Hessian. ♂, æt. c. 45. Soldier. V.L. d. J.

A 86, B 21·1, C 15·4, *a* 5·2, *b* 5·7, *c* 4·5, D 15·1, E 7·2, F 5·8 *p*, *a* 5, *b* 5·1, *c* 4·4, G 5·7, *a* 4·9, *b* 5, *c* 4·2, H 4·5, I 5·5, J 80, K 79.

The outer extremities of the coronal suture are ossified.

2. 1332. Hessian. ♂, æt. c. 25. V.L. d. J.

A 79, B 21·1, C 15·5, *a* 5·1, *b* 5·7, *c* 4·7, D 14·9, E 7·3, F 5·7 *t*, *a* 4·8, *b* 5·2, *c* 5, G 5·2, *a* 4·8, *b* 4·8, *c* 4, H 4·4, I 5·3, J 78, K 71.

In this skull there is complete ossification and obliteration of the sagittal and the mastoid sutures. The deformation is scarcely perceptible. The other sutures are open.

d. *Prussians*.

1. 328. Prussian. From *Westphalia*. ♂, æt. c. 50.

A 88, B 22·1, C 15·6, *a* 5·2, *b* 5·5, *c* 4·9, D 15·2, E 7·8, F 5·8 *p*, *a* 5, *b* 5, *c* 4·8, G 5·6, *a* 4·6, *b* 4·8, *c* 4·5, H 5·4, I 5·5, J 74, K 72.

A large dolichocephalic skull from the collection of Prof. M. N.-C. DE FREMERY, Utrecht.

2. 329. Prussian. ♂, æt. 60.

A82, B21·5, C15·6, a5·3, b5·5, c4·8, D15·6, E7·6, F5·6p, a4·8, b5·2, c4·9, G5·7, a4·9, b5, c4·2, H4·9, I5·7, J·73, K·75.;

From the collection of Prof. M. N.-C. DE FREMERY, of Utrecht.

3. 364. Prussian. From Coblenz. ♀, æt. 40.

A 67, B 20, C 14·2, a 4·8, b 5·2, c 4·2, D 14, E 7, F 5·4p, a 4·4, b 5·1, c 4·1, G 5, a 4·4, b 4·6, c 4·1, H 4·3, I 4·8, J·77, K·71.

4. 751. Prussian. "J. L. W. OELDRICH," from Paderborn. ♂, æt. 53.

B 21·8, C 15·3, D 14·8, E 7·6, F 5·9p, a 4·8, b 5·2, c 4·4, G 5, a 4·6, b 4·7, c 4·2, H 5, I 5·4, J·77, K·65.

A large platycephalie skull, the sutures of which are almost entirely obliterated.

5. 1248. Prussian. ♂, æt. e. 50.

A85, B 20·9, C 14·8, a 4·9, b 5, c 4·9, D 15·3, E 7·1, F 5·9p, a 4·8, b 5·6, c 4·5, G 5·3, a 4·7, b 4·8, c 4·3, H 4·6, I 5·5, J·83, K·74.

Has a triquetral bone in the left spheno-parietal suture. Prof. WELCKER has drawn the outlines of the bones of a newborn infant's skull upon this example, as explained in his *Wachsthum und Bau*, S. 2, and figured in Taf. i. figs. 1, 3, and 5.

6. 1249. Prussian. ♂, æt. e. 30.

A 78, B 20·2, C 14·3, a 4·8, b 5·2, c 4·3, D 15, E 6·9, F 5·7p, a 4·8, b 5·3, c 4·4, G 5·5, a 4·7, b 4·8, c 3·8, H 4·3, I 5·2, J·82, K·79.

Has a triquetral bone in each of the spheno-parietal sutures, and has a frontal suture. This is an example of the *brachycephalia frontalis* of Dr. WELCKER, who has made the same drawings on it as those made on No. 1248. It illustrates figs. 2, 4, and 6 in the same Plate.

7. 1250. Prussian. ♂, æt. e. 40. Saalkreise, surrounding Halle.

A 90, B 21·2, C 15, a 5·3, b 4·9, c 4·8, D 16·1, E 7·1, F 6·2p, a 5·3, b 5·3, c 4·7, G 5·5, a 5, b 5·1, c 4·3, H 4·7, I 5·3, J·87, K·77.

A globose, tumid skull of great capacity, which suggests the idea of hydrocephalus in early life.

8. 1251. Prussian. ♂, æt. e. 40. Saalkreise.

A 81, B 20·7, C 14·3, a 5·2, b 4·4, c 4·7, D 14·4, E 7, F 5·7p, a 4·9, b 5·2, c 4·3, G 5·2, a 4·5, b 4·6, c 4·3, H 4·6, I 5·2, J·81, K·74.

9. 1252. Prussian. ♂, æt. e. 45. *Saalkreise*.

A 80·5, B 21·3, C 15·7, *a* 5·6, *b* 5·4, *c* 4·7, D 15·2, E 7·3, F 5·8*p*, *a* 4·9, *b* 5·5, *c* 4·5, G 5·5, *a* 4·9, *b* 5, *c* 4·1, H 4·9, I 5·2, J 80, K 75.

These five, fine, large German skulls (Nos. 1248 to 1252) were presented by the eminent craniologist, Professor Hermann WELCKER, of Halle. They may be regarded as favourable representatives of the German race.

10. 1253*. Mask of FREDERICK II., King of Prussia.

11. 985. German. ♂, æt. e. 50.

D.C.

A 90, B 22·7, C 16·1, *a* 5·6, *b* 5·8, *c* 4·7, D 15·4, E 8·1, F 5·8*p*, *a* 5·4, *b* 5·3, *c* 4·5, G 5·2, *a* 4·9, *b* 4·7, *c* 4·5, H 5·1, I 5·2, J 71, K 64.

This very large skull with frontal diameter, *a*, wider than parietal, *b*, and having a frontal suture, the cause of this appearance, is that of a man who died in the hospital at Metz, March 1840. It presents united fracture and displacement of the nasal bones.

12. 1468*. German. ♀, new-born.

A plaster cast of the new-born infant's skull figured in Tafel xiv. figs. 2, 3, and 4 (fig. 1 represents the child's head), and described at S. 122 of Prof. H. WELCKER's *Wachsthum und Bau*. It presents the form to which he gave the name of *trigonocephalus*, produced by premature synostosis of the *two* frontal bones. That this is its true nature is proved by the existence in this case of the frontal suture for nearly half its length, superiorly.

1467*. Jewess. ♀, æt. 5.

The cast of a trigonocephalic cranium of a very young Jewess in the Halle collection. This skull also is described and figured in the work just cited: S. 120, Taf. xv. and xvi.

1467* and 1468* were presented by Prof. WELCKER.

e. Badener.

359. Badener. ♀, æt. 30.

A 65, B 19·5, C 13·7, *a* 4·7, *b* 4·8, *c* 4·2, D 14·4, E 6·6, F 5·4*p*, *a* 4·6, *b* 4·7, *c* 4·4, G 4·7, *a* 4·3, *b* 4·3, *c* 3·5, H 4·4, I 4·7, J 81, K 71.

From the DE FREMERY collection.

Average measurements of 8 ♂ Prussian skulls. A 83·5, B 21·2, C 15, *a* 5·1, *b* 5·1, *c* 4·7, D 15·2, E 7·3, F 5·8, *a* 4·9, *b* 5·2, *c* 4·5, G 5·4, *a* 4·7, *b* 4·8, *c* 4·2, H 4·8, I 5·3, J 80, K 74.

Extremes, A 78-90, J 73-87, K 65-79.

Averages of the skulls of 2 German women. A 66, B 19·7, C 13·9, a 4·7, b 5, c 4·2, D 14·2, E 6·8, F 5·4, a 4·5, b 4·9, c 4·2, G 4·8, a 4·3, b 4·4, c 3·8, H 4·3, I 4·7, J 7·9, K 7·1.

References.—BLUMENBACH, *Dec. Cran.* Tab. lxi. C. G. CARUS, *Atlas der Cranioscopie*, Leipzig, 1843–45, 4to: Heft i. Taf. i., SCHILLER; Taf. iv. (Cretin); Heft ii. Taf. vi. (Selbstmörderin); vii., ALBRECHT; viii. (Idiot). *Neuer Atlas der Cranioscopie*, fol., 1864, Taf. xxii., J. G. KUTSCHKE. LUCÆ, *Zur organischen Formenlehre*, 1845, 4to, Taf. i., ii., iii., iv., xii. Id. *Zur Architectur des Menschenschädels*, Frankfurt, 1857, fol., Schädel bekannter Personen, Taf. i., ii., iii., iv., v., ix., x., xi., xii. Id. *Zur Morphologie der Racen-Schädel*, 1864, Taf. 16, 17. EMIL HUSCHKE, *Schädel, Hirn und Seele*, 1854, Jena, 4to, Taf. i. figs. 1, 2. It is remarkable that the ancient German calvarium, found at Jena, and selected by Prof. HUSCHKE upon which to exemplify his system of cranial triangulation, should have been synostotic and abnormal. It affords no trace of the sagittal suture, and is scaphocephalic. WILLIAMSON, *Obs. on Hum. Crania*, p. 10. MEIGS, *Cat. Mortonian Coll.* p. 22. VAN DER HOEVEN, *Catalogus*, p. 9. W. VROLIK, *Catalogue*, p. 14. V. WITTICH, *Beschreibung einiger Altpreußen-Schädel. Schrift. der k. physik.-ökon. Gesellsch. zu Königsb.* 1860, 4to, S. 45, figs. WELCKER, *Wachsthum und Bau*, Leipzig, 1862, 4to, S. 45. ALEX. ECKER, *Crania Germaniæ merid. occident.* mit 38 Tafeln, Freiburg i. B. 1865, 4to. ADOLPH FRIEDERICH, *Crania Germanica Hartagowensia*, Wernigerode, 1865, 4to, mit 22 Tafeln.

H. RACES OF SAXONY.

102. Saxon. From Leipzig. ♂, æt. c. 60.

A 90, B 22·2, C 15·6, a 5·3, b 5·3, c 5, D 16, E 7·4, F 6·4p, a 5·5, b 5·7, c 5, G 6·1, a 5, b 5·2, c 4·3, H 4·8, I 5·4, J 8·6, K 8·2.

A large, very brachycephalic modern Saxon skull, in which both the sagittal and lambdoid sutures are ossified, probably normally by age. On the left side is a large paramastoid process, which has articulated with the atlas.

I. RACES OF SWITZERLAND.

1. 184. Swiss. ♂, æt. c. 50.

A 82·5, B 21, C 14·8, a 5·4, b 4·8, c 4·6, D 15·4, E 7·2, F 5·9p, a 5, b 5·3, c 4·5, G 5·4, a 4·6, b 4·7, c 4, H 4·5, I 5·4, J 8·2, K 7·5.

Another large brachycephalic skull, from the collection of Dr. Robert KNOX, of Edinburgh.

This skull belongs to "the Helvetian type" of Professor HES,

which, he says, "has been at all times the dominant form of all Swiss skulls;" to this, he adds, "We possess in the pileworks of the stone, bronze, and iron periods but *one* type, the Helvetian, which has been transmitted to the present period." Carl Voer, *Lectures on Man*, 1864, pp. 388-389.

2. 1333. Swiss. ♂, æt. e. 25. Native of Berne. Soldier. V.L.d.J. A79, B20·5, C14·1, a5·2, b4·8, c4·1, D14·6, E7, F5·9p, a4·9, b5·4, c4·7, G5, a4·5, b4·5, c3·9, H5, I5·1, J·82, K·71.

The lower jaw is attached by its own ligaments. Served as Tambour in his regiment, and died in Holland.

References.—W. VROLIK, *Beschrijving van gebrekkigen Hersen en Schedel-Vorm*, Amsterdam, 1854, 4to, pl. iii. Ludwig RÜTIMEYER und Wilhelm HIS. *Crania Helvetica*, 1864, Basel und Genf, 4to, 82 Doppeltafeln, in the unfortunate method of Prof. LUCÆ.

J. RACES OF POLAND.

a. Pole.

1337. Pole. "DOEBEROSKI." ♂, æt. e. 50. V.L.d.J. A76, B19·9, C14·4, a4·8, b5·4, c4·2, D14·8, E6·8, F5·6p, a4·6, b5, c4·4, G5·6, a4·6, b4·8, c3·8, H4·7, I5·4, J·82, K·82.

This brachycephalic skull of a soldier, probably in the Russian service, is inscribed on one side "POOL," on the other "DOEBEROSKI."

b. Jews.

1. 24. Jew. ♂, æt. e. 50. Calv. A70, B20·3, C14·4, a5·1, b4·9, c4·4, D14·8, E6·9, F5·8p, a4·9, b5·4, c4·5, G5·2, a4·4, b4·7, c4·2, J·84, K·75.

A very brachycephalic prognathous calvarium of a Polish Jew, who died in the London Hospital. The *os frontis* and all the calvarium decidedly flat—platycephalous, the height of the first being only 4·4 in. The very prominent aquiline *ossa nasi* have been fractured in the middle, and are united irregularly. BLUMENBACH's chief distinguishing marks of the Jewish cranium were the peculiar nose, the prominent nasal spine of the superior maxillaries, and the strongly projecting chin. The two former are present in No. 24. Mr. BUSK has informed me that a series of Jewish skulls from an ancient cemetery in the Galerie Anthropologique, in Paris, are brachycephalic. The late Prof. W. VROLIK possessed 6 Jewish skulls, which are described and measured in his *Catalogue*, p. 27. He says they are all dolichocephalic; but, according to Mr. BUSK's rule, 3 are dolicho- and 3 brachycephalic. I believe there is more diversity in the configuration of the Jewish skull than has been generally admitted.

2. 1334. Jew. "Sam Monrovy." ♂, æt. 30. V.L.d.J.
A 91·5, B 22, C 15·6, *a* 5, *b* 5·5, *c* 5·1, D 15·3, E 7·9, F 5·9 *t*, *a* 5,
b 5·2, *c* 4·5, G 5·5, *a* 4·8, *b* 4·9, *c* 4·5, H 5, I 5·5, J 7·4, K 69.

This very large, in truth enormous, and fine example, of great rarity, is the skull of a *Sapeur* in the French army.

References.—BLUMENBACH, *Dec. Cran.* Tab. xxviii., xxxiv.; *De Gen. Hum. Var. Nat.* ed. 3, pp. 195–196. M. J. WEBER, *Die Lehre von den Ur- und Racen-Formen der Schädel*, 1830, 4to, Tab. v. SANDIFORT, *Tab. Cran. div. Nat.* "Cranium Judaei." LUCÆ, *Schädel bekannter Personen*, 1857. In this work two of the skulls lithographed appear to be those of Jews—that of the famous SEHINDERHANNES, Taf. vi. and vii., which HYRTL described as "one of the finest and most regular Jewish skulls I ever saw" (*Top. Anat.* i. p. 117), and that of Taf. x.

K. RACES OF LIVONIA.

1. 578. Lett. ♀, æt. e. 25.
A 78·5, B 20·6, C 14·7, *a* 4·9, *b* 5·1, *c* 4·7, D 14·4, E 7·2, F 5·5 *p*, *a* 5,
b 5·1, *c* 4·3, G 5·6, *a* 4·6, *b* 4·8, *c* 4·2, H 4·4, I 5, J 7·6, K 77.

This regular, oval, and beautiful skull of a Lettish woman is remarkable for a frontal suture, a multitude of very small Wormian bones in the lambdoid suture, a few in the sagittal, the unossified speno-basilar synchondrosis, and in possessing on each side of the occipital, between the condyle and the mastoid, a small "pneumatic" process of HYRTL¹. It also exhibits a foramen through the base of the external pterygoid process, for the passage of the internal division of the inferior maxillary nerve—an anomaly asserted by HYRTL to be very rare.

She appears to have used some acid preparation to her teeth, which are grooved horizontally with three or four grooves in each.

Reference.—ISENFLAMM, *Beschr. menschl. Köpfe*, Nürnberg, 1813, S. 14, 4to.

2. 577. Esthonian. ♂, æt. e. 60.
A 75, B 21·2, C 15·2, *a* 5·1, *b* 5·4, *c* 4·7, D 15, E 7·4, F 5·5 *p*, *a* 4·7,
b 4·8, *c* 4·3, G 5·6, *a* 4·6, *b* 4·8, *c* 4·2, H 5, I 5·4, J 7·4, K 75.

A large dolichocephalic skull of an Esthe.

Nos. 578 and 577 presented by Professor REISSNER, of the University of Dorpat.

References.—ISENFLAMM, *ibid.* S. 14. Dr. Alex. HUECK, *De Craniis Estonum Commentatio Anthropologica*, Dorpat, 1838, ii. Tabulæ, 4to. J. VAN DER HOEVEN, *Beschrijving van eenen Magyaren- en van eenen Esthlander-Schedel*, Plaat. Verslag. der k. Akademie, 8vo.

¹ *Natural History Review*, ii. 95.

L. RACES OF AUSTRIA.

1. 375*. Croat. From *Ogulin*, in Croatia. ♂. Calv.

B 22·4, C 15·8, *a* 5·5, *b* 5·6, *c* 4·7, D 16·9, E 7·4, F 6·8 *p*, *a* 5·4, *b* 6·3, *c* 5, G 5·8, *a* 5·3, *b* 5·4, *c* 4, I 5·4, J·92, K·78.

An extraordinarily broad brachycephalic calvarium (J·92) with flat occiput. HUSCHKE describes the skull of a Croat, at Dresden¹, which is as remarkable for length and narrowness; but it is a scaphocephalus, and owes its peculiarities to the *synostosis* of the sagittal suture. The original of our Croat calvarium is in the collection at the Carolinska Institute, and, I think, shows indications of having been hydrocephalic.

Presented by the late Prof. RETZIUS.

References.—J. B. SPIX, *Cephalogenesis*, Monachii, 1815, fol. Tab. i. fig. 1, a native of the Tyrol. M. P. ERDL, *Tafeln zur vergleich. Anatomie des Schädels*, Tab. i. fig. 1. RETZIUS, *Ethnol. Schriften*, S. 140.

2. 358*. Avar? Found at Feuersbrunn bei Grafenegg. Calv.

B 20·3, C 16, D 14·8, E 6·4, F 5·5 *t*, *a* 4·2, *b* 4·9, *c* 4, G 6·1, *a* 4·6, *b* 5·8, *c* 4·2².

This is the small calvarium of an adult, but neither the sex nor the age is apparent. It has been greatly distorted by bandages, one of which has passed across the middle of the frontal, and another, avoiding the region of the coronal suture, across the fore and middle part of the parietals, and both round the middle of the occipital, so as to convert the whole hindhead into a truncated cone. It is the *tête symétrique allongée en cylindre* of Dr. L. A. Goss. The mode of applying the bandages was explained by MORTON, *Illustrated System of Human Anatomy*, 1849, p. 75, figure. The figure has often been repeated (MEIGS's *Catalogue of the Mortonian Coll.* p. 77). This has long been known as a usual mode of artificial distortion among the ancient Peruvians, particularly the tribes about Lake Titicaca; the Feuersbrunn example proved that it had been practised by some ancient tribe or tribes of the old world. By specimens recently received from Vancouver's Island (Nos. 1187 and 1188) it becomes obvious that some of the tribes of that island have adopted exactly the same means for that deformation of the skull they consider it desirable to rejoice in. Lest these agreements among distant people in their customs should be quoted in support of the childish assumption that the art had been communicated, I may add that, whilst there is not the most tenuous shadow of

¹ *Schädel, Hirn und Seele*, 1854, S. 40.

² These measurements do not agree with those of Prof. FITZINGER, not being taken from the same points.

faet for such an erroneous assumption, the agreement is otherwise explicable on the simplest and most rational grounds.

This, with another like skull, found at Atzgersdorf, near Vienna, has been described and figured by Prof. L. J. FITZINGER, and both are attributed by him to the Avars. FITZINGER's first memoir is entitled *Ueber Avaren-Schädel*, 8vo, 1851; the second, just alluded to, *Ueber die Schädel der Avaren*, mit 4 Tafeln, Wien, 1853, 4to. The attribution of the skulls to the Avars appears to have no secure foundation. *Cran. Brit.* p. 36, ante, p. 32. RETZIUS, *Ueber die künstlich geformten Schädel der alten Welt*, *Ethnol. Schriften*, S. 125. VON BAER, *Die Makrocephalen im Boden der Krym und Oesterreichs*, mit 3 Tafeln, St. Petersburg, 1860, 4to. The distinguished Prof. VON BAER, who favours the Avar hypothesis, figures a skull of one of the modern *Avars* of the Caucasus (Taf. ii. fig. 6), and sees a likeness in it to the deformed skulls (S. 56-57). The artist appears not to have introduced the sutures correctly. Still I cannot but regard as of very small importance such slight resemblance as there may be.

3. 1466. Czech. "Cyril TOMEK." ♂, æt. 21.

A 67, B 20.1, C 14, c 4.5, D 14, E 6.9, F 5.7t, a 4.8, b 5.2, c 4.3, G 4.8, a 4.3, b 4.2, c 3.9, H 4.5, I 5, J .82, K .69.

A platycephalic and brachycephalic skull, which has a frontal suture, of a young man from Vaej Ujhely, in Moravia, who died of pneumonia, Aug. 8, 1855, and was buried there. He was of the Tribe of *Hanaken*. Two out of the three Czech skulls in Prof. VAN DER HOEVEN's *Catalogus* are brachycephalic.

Presented by Professor H. WELCKER.

M. RACES OF FINLAND.

1. 225*. Finn. From *Tavastland*. ♂.

B 21, C 14.8, a 5.2, b 5.5, c 4.1, D 15.4, E 7, F 5.9p, a 5.2, b 5.5, c 4.6, G 5.5, a 4.9, b 4.7, c 3.9, H 4.7, I 5.1, J .84, K .78.

Presented by Prof. RETZIUS.

2. 331. Finn. "Johan LAAKONEN." From *Kides*, Carelia. ♂, æt. 45.

A 76, B 21, C 15, a 5.2, b 5.4, c 4.4, D 15.5, E 7.1, F 5.9p, a 4.9, b 5.3, c 4.4, G 5.3, a 4.8, b 4.9, c 4, H 4.2, I 5.6, J .83, K .74.

3. 332. Finn. From *Kemi*. ♂, æt. e. 50.

A 75, B 20.3, C 14.3, a 4.9, b 5.1, c 4.3, D 14.8, E 6.9, F 5.7p, a 4.7, b 5.3, c 4.5, G 5.4, a 4.6, b 4.8, c 4, H 4.7, I 5.5, J .82, K .78.

4. (332.) Finn. "Joseph KOLEKMAIN." From *Lappawirta*, Savolax. ♂, æt. 64.

A 79·5, B 20·5, C 14·7, *a* 5, *b* 5·1, *c* 4·6, D 15, E 7, F 5·6 *p*, *a* 4·9, *b* 5·3, *c* 4·4, G 5·4, *a* 4·6, *b* 4·8, *c* 4·1, H 5, I 5·2, J 80, K 77.

Has a slight annular deformation.

5. 666. Finn. "Johan Mattsson ANTILA." From *Hollola*, Nylands Län, Tavastia. ♂, æt. 33.

A 78, B 20·4, C 15, *a* 5·1, *b* 5, *c* 4·9, D 14·6, E 7, F 5·7 *t*, *a* 4·5, *b* 5·2, *c* 4·3, G 5·2, *a* 4·5, *b* 4·7, *c* 4·2, H 4·8, I 5·2, J 81, K 74.

6. 667. Finn. From *Tavastia*. ♂, æt. c. 60.

A 82, B 20·5, C 14·5, *a* 4·9, *b* 5·3, *c* 4·3, D 15·3, E 6·9, F 5·9 *p*, *a* 4·8, *b* 5·2, *c* 4·9, G 5·9, *a* 4·7, *b* 4·8, *c* 3·9, H 5·2, I 5·8, J 85, K 85.

Nos. 331 to 667 presented by Dr. Evert Jules BONSDORFF, Professor of Anatomy, University of Helsingfors.

7. 1125. Finn. From *Kangasala*. ♂, æt. e. 70.

A 82, B 21, C 15·2, *a* 5·2, *b* 5·1, *c* 4·9, D 15·6, E 7·3, F 5·9 *p*, *a* 4·8, *b* 5·7, *c* 4·4, G 5·7, *a* 4·9, *b* 5, *c* 3·8, H 4·7, I 5·4, J 80, K 78.

Brachycephalic, with narrow frontal region.

8. 1126. Finn. From *Birkala*. ♂, æt. e. 60.

A 82, B 20·8, C 14·8, *a* 4·8, *b* 5·3, *c* 4·7, D 15·9, E 7·1, F 5·7 *p*, *a* 5·1, *b* 5·2, *c* 4·4, G 5·7, *a* 4·9, *b* 5, *c* 3·9, H 5·1, I 5·7, J 80, K 80.

9. 1143. Finn. *Sodenkyla*. ♀, æt. e. 30.

A 91, B 21·1, C 15·2, *a* 5·3, *b* 5·2, *c* 4·7, D 15·3, E 7·2, F 6 *p*, *a* 5·1, *b* 5·4, *c* 4·6, G 5·6, *a* 4·7, *b* 5, *c* 4·2, H 4·9, I 5·4, J 83, K 77.

This is a fine, large, brachycephalic cranium.

The population of Sodenkyla, which is in North Finland, is much mixed with Lapps.

These nine crania of Finns, which are fine examples, are all brachycephalic (J 80 to 85). This quite agrees with RETZIUS's determination. He places the Finns among his European orthognathous brachycephali (*Blick*, S. 7). The means of his measurements also agree with these closely. Those of RETZIUS are J 80, K 79. Ours are J 82 and K 78. Dr. BEDDOE recently measured the heads of a ship's crew of 8 Finns, from the Province of Uleaborg. They were all brachycephalic, all fair, with light hair; some had slightly oblique eyes; the cheek-bones were broad, and the jaws strong. In Prof. BONSDORFF's Essay to determine the vital capacity of the lungs in Finns, he deduces the mean stature of a regiment of Finnish riflemen, 682 strong, to be 5 ft. 7·5 in. Engl. (*Försök att bestämma Lungornes vitalkapacitet hos Finnar*, Helsingfors, 1860, 4to, p. 240). This is very different from the average stature of the Lapp men,

which was found to be only 5 feet. Still the two races agree in brachycephaly.

Average measurements of 8 ♂ Finn skulls (omitting No. 1143).
A 79.2, B 20.7, C 14.8, *a* 5, *b* 5.2, *c* 4.5, D 15.2, E 7, F 5.7, *a* 4.8,
b 5.3, *c* 4.5, G 5.5, *a* 4.7, *b* 4.8, *c* 4, H 4.8, I 5.4, J .82, K .78.

Extremes, A 75–82, J .80–.85, K .74–.85.

These averages show a considerable resemblance to the Lapp skulls.

References.—MEIGS, *Catalogue of Mortonian Coll.* p. 20. RETZIUS, *Ethnol. Schrift.* S. 12, Taf. iii. fig. iii.

N. RACES OF RUSSIA.

a. Russians.

1. 330. Russian. ♂, æt. c. 50.

A 92, B 22.2, C 15.9, *a* 5.5, *b* 5.4, *c* 5, D 15.6, E 7.8, F 6.1*p*, *a* 5.3,
b 5.9, *c* 4.6, G 5.4, *a* 4.8, *b* 4.9, *c* 4.4, H 5.1, I 5.5, J .78, K .69.

A very large platycephalie skull, having a frontal suture, from the Crimea.

2. 333. Russian. "LOSCHKOW." ♂, æt. 43. *Jaraslowlka* Government.

A 83, B 20.1, C 14.5, *a* 4.9, *b* 5.3, *c* 4.3, D 15, E 6.8, F 5.7*p*, *a* 4.8,
b 5.4, *c* 4.2, G 5.8, *a* 4.8, *b* 4.8, *c* 4, H 5.3, I 5.4, J .83, K .85.

The mastoid foramina are unusually large.

3. 335. Russian. "NIKIFOR POPOFF." ♂, æt. 29. *Viborg*.

A 87, B 21.6, C 15.5, *a* 5.2, *b* 5.8, *c* 4.5, D 15, E 7.6, F 5.7*t*, *a* 4.9,
b 5, *c* 4.5, G 5.7, *a* 4.7, *b* 4.9, *c* 4.3, H 4.7, I 5.6, J .75, K .75.

4. 336. Russian. "IVAN JAKOVLEFF." ♂, æt. c. 35. *Archangel*.

A 91, B 21.7, C 15.4, *a* 5.3, *b* 5.2, *c* 4.9, D 15.7, E 7.6, F 5.8*p*, *a* 4.9,
b 5.2, *c* 4.8, G 5.8, *a* 4.9, *b* 5, *c* 4.4, H 5.2, I 5.7, J .76, K .76.

These four large crania of Russians are mostly distinguished by great boniness, or massive rudeness of structure.

They were presented by Prof. E. J. BONSDORFF.

5. 847. Russian. ♂, æt. c. 60. *Moscow*. D.C.

A 81, B 20.9, C 14.6, *a* 5, *b* 5, *c* 4.6, D 15.1, E 6.9, F 6.1*t*, *a* 5.3, *b* 5.4,
c 4.6, G 5.1, *a* 4.7, *b* 4.6, *c* 3.9, H 4.9, I 5.5, J .88, K .74.

A very brachycephalie skull, with broad, flat face, square forehead, and frontal suture.

6. 926. Russian. ♂, æ. 45. From *Spitzbergen*. D.C.
A 83, B 21·9, C 15·5, *a* 5·2, D 14·5, E 7·7, F 5·8 *t*, *a* 4·5, *b* 5·2,
c 4·4, G 5·3, *a* 4·6, *b* 4·7, *c* 4·3, H 4·9, I 5·5, J 7·5, K 68.

This large dolichoecephalic skull was found in *Spitzbergen*, and presented to Joshua BROOKES by Mr. ROWLAND, Assist.-Surg. to one of H.M. Arctic Expedition ships. There are traces of fair or light-brown hair upon it. RETZIUS had a Russian cranium from a grave in *Spitzbergen* (*Om Formen*, Dutch tr. S. 18).

7. 960. Russian. ♀, æt. e. 18. Calv. D.C.
A 83, B 20·9, C 14·7, *a* 5, *b* 4·9, *c* 4·8, D 14·2, E 7·4, F 5·7 *t*, *a* 4·7,
b 4·7, *c* 4·3, G 5·1, *a* 4·5, *b* 4·7, *c* 4·4, I 4·9, J 7·7, K 68.

Like No. 965, has a frontal suture, and a distinct trace of annular deformation across the fore part of the parietals.

8. 961. Russian. ♂, æt. e. 50. Calv. D.C.
A 72, B 20·6, C 14·3, *a* 4·8, *b* 4·9, *c* 4·6, D 14·4, E 7·2, F 5·5 *t*, *a* 4·4,
b 4·9, *c* 4·3, G 5·1, *a* 4·4, *b* 4·5, *c* 4·1, I 5·3, J 7·6, K 70.

9. 962. Russian. ♂, of considerable age. Calv. D.C.
A 77, B 21·5, C 15·1, *a* 5, *b* 5·5, *c* 4·6, D 14·3, E 7·5, F 5·8 *p*, *a* 4·8,
b 4·8, *c* 4·3, G 5, *a* 4·7, *b* 4·7, *c* 4·3, I 5·1, J 7·7, K 66.

Affected with thickening and disease of the frontal, parietals, and occipital.

Nos. 960 and 961 from a burial-place near St. Petersburg, and presented to DEVILLE by Mr. CARSLAND, Engineer.

10. 964. Russian? ♂, æt. e. 60. Calv. D.C.
A 72, B 20·7, C 15, *a* 5, *b* 5·5, *c* 4·5, D 15·1, E 7·3, F 5·4 *p*, *a* 4·6,
b 5·2, *c* 4·1, G 5·3, *a* 4·6, *b* 4·9, *c* 4·2, J 7·4, K 72.

11. 965. Russian? ♀, æt. e. 75. Calv. D.C.
A 78, B 20·6, C 15, *a* 5·1, *b* 5·1, *c* 4·8, D 14·8, E 7·3, F 5·5 *p*, *a* 4·8,
b 4·8, *c* 4·3, G 5·5, *a* 4·4, *b* 4·9, *c* 4·3, I 4·8, J 7·5, K 75.

Frontal suture persistent; has a triquetral bone in the left half of the coronal suture, and a distinct trace of annular deformation (like No. 960).

Nos. 964 and 965 from Siberia. Also from Mr. CARSLAND.

12. 1148. Russian. Vadsö, in East Finnmark. ♀, æt. c. 70.
A 84, B 20·2, C 14·5, *a* 4·6, *b* 5·2, *c* 4·7, D 14·9, E 6·8, F 5·8 *p*, *a* 4·7,
b 5·5, *c* 4·5, G 5·6, *a* 4·7, *b* 4·9, *c* 4, H 4·6, I 5·2, J 8·5, K 82.

A prognathous, brachycephalic skull of an old woman, which is very wry from parieto-occipital flattening towards the right side.

May perhaps belong to a Russo-Skolte-Finn, a special race occupying the country from Kola to near Jacob's Elv.

13. 1335. Russian. ♂, æt. c. 45. Soldier. V.L. d. J.
A75, B20·8, C14·8, a5, b4·9, c4·9, D14·8, E7·2, F5·9p, a4·7,
b5·4, c4·6, G5·4, a4·4, b4·7, c4·2, H4·8, I5·3, J·81, K·75.

14. 1336. Russian. ♂, æt. c. 35. Soldier. V.L. d. J.
A77, B20·8, C14·7, a4·9, b4·9, c4·9, D14·3, E7·5, F5·5p, a4·7,
b4·8, c4·7, G5·5, a4·5, b4·6, c4·2, H4·9, I5·2, J·73, K·73.

Bears indications of the smoking of a pipe on the right and also on the left side. This large, bony Russian skull is much unlike that of a Dutchman or German.

Of these 14 skulls of Russians, only three are brachycephalic, leaving out No. 1148, which most likely has Finn blood. RETZIUS considers all the Slavic races to be brachycephalic, and includes the Russians in his Europ. orthog. brachyc. (*Blick*, S. 7; *Om Formen*, S. 18). J. VAN DER HOEVEN, *Catalogus*, pp. 18–22, describes 13 skulls of Slavonic people, 6 of which are Russians. The means of his measurements of the whole series give, according to our modulus, a proportionate breadth of J82·8, which brings them into the brachycephalic category.

Average measurements of 10 ♂ Russian skulls. A80·1, B21·2, C15, a5, b5·2, c4·7, D14·8, E7·3, F5·7, a4·8, b5·2, c4·5, G5·4, a4·6, b4·7, c4·2, H4·9, I5·5, J·78, K·73.

Extremes, A72–92, J·73–88, K·66–85.

References.—E. SANDIFORT, *Mus. Anatom.* vol. ii., “Cranium Russi.” DEMIDOFF, *Voy. dans la Russie Mérid. et la Crimée*, 4 vols. 8vo, 1840–42 (contains plates of the skulls of Russians). K. E. VON BAER, *Nachrichten über die Ethnograph. craniol. Samml.* S. 75. In this place the St. Petersburg Professor mentions the results of his measurements of 30 Russian skulls. These are—Length 1000, Height 778, Greatest Breadth 835; or, reduced to my terms, J·83, K·77. Id. *Bericht über die Zusammenkunft einiger Anthropologen in Göttingen*, Leipzig, 1861, 4to, S. 34 u. 85, Taf. i. *Klein Russe*, “der Typus eines exquisit brachycephalen Schädels.” Id. *Planche Crâniologique* in PAULY, *Descr. Ethnographique des Peuples de la Russie*, 1862, fol., St. Petersburg. W. VROLIK, *Catalogue*, p. 19. RETZIUS, *Ethnol. Schrift.* S. 8, Taf. iii. fig. iv.

b. Cossacks.

1. 972. Cossack. ♂, æt. c. 80. D.C.
A80·5, B20·6, C15·5, a5·5, b5·3, c4·7, D15·5, E7·2, F5·5t, a4·7,
b5·1, c4·4, G5·4, a4·8, b5, c4·2, H5, I4·9, J·76, K·75.

The nasal bones present the aquiline form, and traces of having been divided across the centre by a sword-cut. The

sutures are very much effaced, the alveoli absorbed, and only one lower and one upper premolar and one canine left on the sinistral side.

2. 973. Cossack. ♀, æt. e. 75. Calv. D.C.

A 76, B 19·8, C 14, *a* 4·7, *b* 5, *c* 4·3, D 14·7, E 6·7, F 5·7*p*, *a* 4·9, *b* 5·2, *c* 4·2, G 5·3, *a* 4·6, *b* 4·7, *c* 3·9, I 4·9, J 85, K 79.

Very short.

3. 1028. Cossack? ♀, æt. e. 20. D.C.

A 81, B 20, C 14·6, *a* 5, *b* 5·2, *c* 4·4, D 14·6, E 6·8, F 5·4*p*, *a* 4·6, *b* 5, *c* 4·1, G 5·6, *a* 4·7, *b* 4·8, *c* 3·9, H 4·8, I 4·9, J 79, K 82.

An elegant skull of a young woman, distinguished by height of calvarium, and length of nose and face. It is very thin and light, with a small carious spot in the centre of the frontal, probably from a blow.

4. 1338. Don Cossack. ♂, æt. c. 40. V.L. d. J.

A 86·5, B 21·7, C 15·5, *a* 5·2, *b* 5, *c* 5·3, D 15, E 7·5, F 5·9*p*, *a* 5·1, *b* 5·5, *c* 4·7, G 5·6, *a* 4·8, *b* 4·9, *c* 4·3, H 4·9, I 5·3, J 80, K 74.

Has a paramastoid process on the left side. The spheno-frontal suture on the right side is ossified and obliterated, yet the frontal suture is quite open. A large ponderous skull of a soldier who died in Hospital, in Holland.

5. 1339. Cossack. ♂, æt. c. 30. Soldier. V.L. d. J.

A 81, B 20·8, C 14·2, *a* 4·9, *b* 4·7, *c* 4·6, D 15·2, E 7·1, F 5·8*p*, *a* 5, *b* 5·3, *c* 4·7, G 5·4, *a* 4·5, *b* 4·6, *c* 4, H 4·8, I 5·5, J 81, K 76.

The sagittal suture is totally obliterated, without the slightest indication of scaphocephalism; in truth, the skull is brachycephalic¹. The parietal foramen on the left side is quite patent. He has received an injury during life on the right parietal, and has smoked a pipe so as to injure the teeth on both sides of his mouth.

None of these crania of Cossacks, one of which (No. 973) is very brachycephalic, present a resemblance to the tortuous etching of BLUMENBACH's Tab. iv. (*Casacci Donensis*), of which he says, "habitus in totum horridus." The original in the Blumenbachian collection is a thick, heavy, and rather small skull, correctly described by BLUMENBACH as of dense texture and great weight. The quadrangular nasal orifice has its sides formed by unusually thick nasal processes of the superior maxillaries, which are flattened, or turned over at the edges. The portraits of Cossacks, *taken from the life at Paris* by George

¹ On *Synostotic Crania among Aboriginal Races of Man*. By Joseph Bernard DAVIS, M.D., 4to, 1865, p. 30. *Trans. Dutch Soc. of Sciences, Haarlem*.

SCHARF, Sen., present short, thick, patulous noses. *Characteristic Portraits of the various Tribes of Cossacks attached to the Allied Armies of 1815: 1820*, 4to. BLUMENBACH's Tab. xiii. (*Kirgisie Casacci*) is much too mongoliform to be compared with these skulls, which are more likely to be European. W. VROLIK, *Catalogue*, p. 20.

Average measurements of 3 skulls of Cossack men. A 82·6, B 20·7, C 15, *a* 5·2, *b* 5, *c* 4·8, D 15·2, E 7·2, F 5·7, *a* 4·9, *b* 5·3, *c* 4·6, G 5·4, *a* 4·7, *b* 4·8, *c* 4·1, H 4·9, I 5·2, J 7·9, K 7·5.

O. RACES OF TURKEY.

1. 990. Turk. ♂, æt. e. 30. Calv. D.C.
A 81, B 20·4, C 14·1, *a* 4·9, *b* 4·9, *c* 4·3, D 15·5, E 6·8, F 6*p*, *a* 5·1, *b* 5·3, *c* 4·4, G 5·5, *a* 4·8, *b* 4·9, *c* 3·7, I 5·3, J 8·8, K 8·0.

This very brachycephalic calvarium of a young Turk, who was killed at the battle of Navarino, Oct. 20, 1827, might be described in the words used by BLUMENBACH for his famous Tab. ii., "Calvaria fere globosa; occipito scil. vix ullo, cum foramen magnum pene ad extremum baseos cranii positum sit. Frons latior. Glabella prominens." It possesses an extensive parieto-occipital flatness, which may with much greater probability be referred to nursing on a hard surface than to the manipulations of the midwives mentioned by VESALIUS and Baron ASCH (*Note on the Distortions which present themselves in the Crania of the Ancient Britons*, by J. Barnard DAVIS, *Nat. Hist. Rev.* 1862, p. 290). Mr. LAWRENCE, so eminent for his acuteness and accuracy, in his admirable *Lects. on the Nat. Hist. of Man*, 1823, p. 328, affirms that BLUMENBACH's crania are represented of the natural size. If any care was taken by the Göttingen Professor on this point, it must have been only occasionally. The vivid etching of Tab. ii. is evidently much below the magnitude of the original.

2. 1214. Turk. ♂, æt. e. 40. Sulina. Calv.
A 75, B 20·3, C 14·7, *a* 5·2, *b* 4·8, *c* 4·7, D 15·1, E 6·9, F 5·7*t*, *a* 4·8, *b* 5, *c* 4·3, G 5·4, *a* 4·8, *b* 4·9, *c* 3·9, I 5·2, J 8·2, K 7·8.

This rare calvarium, so much like the preceding, is from the cemetery of Sulina, on one of the mouths of the Danube.

3. 1340. Turk. ♂, æt. e. 30. Asiatic Turkey. V.L.d.J.
A 74, B 20·5, C 14·2, *a* 4·9, *b* 4·9, *c* 4·4, D 14·6, E 7, F 5·9*p*, *a* 4·7, *b* 5·2, *c* 4·6, G 5·3, *a* 4·4, *b* 4·6, *c* 4, H 4·1, I 5·3, J 8·4, K 7·5.

. A very fine brachycephalic skull of a Turkish soldier, who

was killed in battle with the Greeks. Presented to Prof. VAN LIDTH DE JEUDE by a French General. All the middle portion of the sagittal suture is ossified, a fact which tends to show that dolichocephalic races are not alone prone to this kind of obliteration. The right parietal foramen is open.

4. 567*. Bashi-bazouk. ARNAUT? ♂, young. *Scutari*.

B19·5, C13·5, D14·3, E6·6, F5·7_p, a4·7, b5·3, c4·4, G5·3, a4·7, b4·5, c3·7, H4, I4·9, J·84, K·80.

From a small brachycephalic skull in the collection of Dr. ALLEN THOMSON, Prof. of Anat., Glasgow. Presented by Prof. THOMSON.

Average measurements of 3 Turkish ♂ skulls. A 76·6, B 20·4, C 14·3, a 4·6, b 4·8, c 4·4, D 15, E 6·9, F 5·8, a 4·8, b 5·1, c 4·4, G 5·4, a 4·6, b 4·8, c 3·8, H 4·1, I 5·2, J·84, K·78. All brachycephalic.

References.—BLUMENBACH, *Dec. Cran.* Tab. ii. G. SANDIFORT, *Tab. Cran. div. Nat.*, "Cranium Turcæ." CARUS, *Grundzüge einer neuen Cranioscopie*, Taf. ii. fig. 3, a beautiful skull of a "Türkischer Räuber." Gottfried SCHADOW, *National-Physiognomien*, Berlin, 1833, fol., pl. x., "RUSTAN, a Turk." RETZIUS, *Ethnology. Schriften*, pl. iii. fig. 6.

II. ASIATIC RACES.



A. RACES OF TARTARY.

941. Russian Tartar. ♂, æt. c. 60.

D.C.

A 76·5, B 20·6, C 14·6, a 5, b 5·1, c 4·5, D 14·5, E 7, F 5·7_p, a 5, b 5·1, c 4·6, G 5·2, a 4·6, b 4·7, c 3·8, H 4·7, J·81, K·74.

A brachycephalic skull with square low forehead.

References.—BLUMENBACH, *Dec. Cran.* Tab. xii. E. SANDIFORT, *Mus. Anat.* ii., "Cranium Tartari."

B. RACES OF ASIA MINOR.

a. *Ancient Race.*

258. Dardanian. ♀, æt. c. 7. Imperf. calv.

Frontal suture open.

Found in a tomb at Dardanus.

b. *Modern Race.*

257. Greek. ♂, æt. c. 45, of *Yenishehr* (ancient *Sigeum*).

A 79, B 19·8, C 14, *a* 5, *b* 4·8, *c* 4·2, D 15, E 6·6, F 5·8_p, *a* 4·5, *b* 5·3, *c* 4·3, G 5·7, *a* 4·9, *b* 4·9, *c* 3·5, H 4·5, I 5·2, J·87, K·86.

An extraordinary brachycephalic skull of a man who was murdered in 1855. It presents a large flat occipital surface, extending from near the middle of the parietals to the superior transverse ridge of the occipital (the result of deformation in infancy). The pressure has occasioned the calvarium to bulge out in the position of the supra-mastoid diameter. There are foramina at the bases of the outer pterygoid processes.

Dr. BEDDOE states that the Greek and Slavic elements appear to predominate in the population about *Yenishehr*.

Nos. 258 and 257 presented by Dr. Jno. BEDDOE. See *Report of the Renkioi Hospital* by Dr. E. A. PARKES, 1856, Appendix ii. *Ethnological Notes* by Dr. J. BEDDOE, p. 46.

C. RACES OF THE CAUCASUS.

I. 334. Lesgian. ♂, æt. e. 35.

A 80, B 19·9, C 14·2, *a* 4·8, *b* 4·9, *c* 4·5, D 15, E 6·7, F 5·6_t, *a* 4·5, *b* 5·1, *c* 4·3, G 5·5, *a* 4·8, *b* 4·8, *c* 4, H 4·8, I 5·4, J·83, K·82.

This very rare and interesting skull was, with another, obtained after a battle in Caucasia. It is not massive, but rather light, is decidedly brachycephalic, and nearly as high as broad. The frontal is remarkably shallow in profile; in the centre it does not project in any part more than 1·6 in. from the plane of the coronal suture; this gives an unusual slope to the forehead, the superciliary region being even. The parietals are short, and gibbous in the centre of their length. The inter-mastoid *line* is wide, viz., taken outside the processes, 5·5 in. The nasal bones are narrow, rather long, and set upon very prominent nasal processes of the superior maxillaries, which rise up without interruption from the flat malar surfaces of these bones, cheek-depressions being absent. The width of the face,

although it is not flat, is considerable. The elevated nose is straight, the nostrils narrow. The orbits are large and quadrangular, 1·6 in. wide, 1·4 in. high. The outline of the lower jaw presents an open angle, so that the body of the maxilla slopes down to a wide pointed chin. The result of these peculiarities of form is a hatchet-shaped outline of face—a prognathousness, or rather problematousness in the central portions; the whole of the superior maxillary and nasal parts of the face project. This feature is faithfully depicted in RAFFET's fine Plate, *Revue de Cavalerie passée par LL. MM. l'Empereur et l'Impératrice de Russie, au Camp de Vosnessensk, Crimée* (DEMIDOFF, *Voy. dans la Russie mérid. et la Crimée*, Paris, 1848, fol.), in which is the figure of one of the Lesgian cavalry with his horse splendidly caparisoned. The calvarium of our skull presents much of the form of the frustum of a square pyramid, from the width of the base, and the oblique slope upwards of the forehead and of the occipito-parietal region. It has a parieto-occipital flatness which is not quite symmetrical. There are likewise slight indications of deformation in a depression across the centre of the frontal bone and another across the region of the coronal suture. The teeth present some irregularities in the upper maxilla, in the abnormal absence of one incisor on each side and the third molar on the right side. On the same side, the second premolar must have been lost at a very early period of life. There is a large oval opening in the right parietal, the result of injury.

Dr. BEDDOE remarks, "I have seen only one Lesgian. He was a short, dark man, with high cheek-bones, and, I thought, a short skull."

Presented by Professor E. J. BONSDORFF, of Helsingfors.

2. 1341. Georgian. ♀, æt. c. 30.

V.L. d. J.

A 75, B 20·3, C 14·8, a 5, b 5·3, c 4·5, D 14·4, E 7·2, F 5·5*p*, a 4·6, b 5·2, c 4·2, G 5·4, a 4·4, b 4·5, c 4·1, H 4·5, I 5, J 7·6, K 7·5.

This beautiful skull is heavy and hyperostotic, and, connected with this state, there is a premature closure of the sutures. The internasal suture is quite obliterated; those surrounding the nasal bones nearly so; those surrounding the alisphenoids, all the outer portions of the coronal, and the right squamous sutures are entirely ossified and effaced. The middle portions of the coronal, the sagittal, the lambdoid, and the left squamous sutures are all very much ossified, yet still traceable. The left malar depression is very considerable, much deeper than the right, unconnected with the teeth, which are all perfect.

There are some slight resemblances between this fine cranium and No. 334, that of the Lesgian—a trace of family likeness, although the two differ so much. This is far the more beautiful. Again, No. 1341 admits of being compared with that which

BLUMENBACH considered the jewel of his collection, *Dec. Cran. Tab. xxi.*, "Feminæ Georgianæ," which figure, unfortunately, is not a true profile. This latter skull itself is rounder than either of those here described, more swollen out at the sides of the calvarium, in the nose and upper part of the face like No. 1341, but with a much fuller and more globular calvarium. Its circumference is 20·7, and its length 7 inches. It is noteworthy that the third upper molar on one side in BLUMENBACH's skull has not been developed, and such is the case also in this cranium. He gave another figure of this skull in *De Gen. Hum. Var. Nat.* ed. 3, Tab. ii.

D. RACES OF ARMENIA.

1. 943. Armenian. ♀, of considerable age. Calv. D.C.
A 67, B 19·3, C 14, *a* 4·6, *b* 4·7, *c* 4·7, D 14·2, E 6·9, F 5·1*t*, *a* 4·2,
b 4·8, *c* 3·9, G 5·3, *a* 4·5, *b* 4·5, *c* 4, I 4·8, J 7·3, K 76.

A long, narrow, regular calvarium of a woman.

This skull exhibits the *condylus tertius* of J. F. MECKEL, in the form of a low tubercle in the middle of the anterior edge of the occipital foramen, which has an articular surface for the *processus dentatus* of the second vertebra.

2. 1020. Armenian. ♂, of great age. Calv. D.C.
A 64, B 18·7, C 13·7, *a* 4·9, *b* 4·5, *c* 4·3, D 13·8, E 6·4, F 5·2*p*, *a* 4·5,
b 4·7, *c* 3·8, G 5, *a* 4·5, *b* 4·5, *c* 3·7, J 81, K 78.

A brachycephalic calvarium of a man, having a frontal suture.

Reference.—BLUMENBACH, *Dec. Cran. Tab. xli.*, "Cranium Armenii."

E. RACES OF ARABIA.

1. 22. Arab. ♂, æt. c. 55.
A 82, B 19·4, C 14·6, *c* 4·2, D 16·1, E 6·3, F 5·7*p*, *b* 5, *c* 4·8, G 6,
a 5·2, *b* 5·3, *c* 4, H 5·1, I 4·9, J 90, K 95.

The cranium of a man who died in the Galleys at Toulon.

The extraordinary dimensions of this fine skull evince a brachycephalism we have not before met with (90·4); whilst the ratio of its height (95·2) is even still more considerable. It has a small circumference, antero-posterior arch, and length; but its interparietal arch is unusually large. In the face likewise it is remarkable for the length exceeding the width. It has a straight, long, narrow face and nose, square orbits, prominent

supraciliary ridges, and a short, tall, almost globular calvarium. The peculiarity of the form of this skull is to be ascribed to a premature and abnormal *synostosis* of the cranial bones. The coronal suture is perfectly obliterated, the sagittal almost wholly so. The calvarium has had a compensatory development upwards. This cranium comes under the division of *Brachycephali*, in LUCÆ's arrangement of abnormal forms of the head, and constitutes a good instance of his *acrocephali*¹.

2. 381. Arab. "MOSSA KADUM." Oman, in Arabia. ♂, æt. c. 30. A 69, B 19, C 13·5, a 4·9, b 4·9, c 3·7, D 15, E 6·3, F 5·5p, a 4·6, b 5·1, c 3·8, G 5·4, a 4·7, b 4·7, c 3·4, H 4·9, I 5, J 8·7, K 8·5.

This admirable and rare specimen, when we refer to its source, probably unique in all cabinets, is very brachycephalic and tall. Its face is prognathous and narrow, with a long slender aquiline nose, square orbits, elevated forehead, and a quadrate calvarium. It exhibits an extensive parieto-occipital flatness, which is not symmetrical, but, contrary to the slight flattening in No. 22, inclining to the right side.

Presented by Rear-Admiral H. M. DENHAM, F.R.S., and Mr. J. D. MACDONALD, Surg. R.N., of H.M.S. 'Herald.'

Both these skulls of Asiatic Arabs, but more especially the latter, bear out the testimony of BORY DE ST. VINCENT that the bones are thinner than in other races (*Sur l'Anthrop. de l'Afrique Française*, 1845, p. 11), and they both support the phrase of Baron DE BELLOGUET, "le crâne exhaussé d'un Arabe" (*Ethnogenie Gauloise, Types Gaul. et Celto-Brit.*, 1861, p. 153).

Capt. R. F. BURTON has been at much pains to describe the Arab skull, and has also given a series of sketches of Arab heads and head-dresses. The figure 2 of his plate, on the left near the bottom, resembles most the skulls Nos. 22 and 381. Capt. BURTON speaks decidedly *against* the assertion that there is "one Arab face, cast of features, and expression;" which view coincides with the diversities I believe to be found in Arab crania. *Pilgrimage to El Medinah and Meccah*, 2nd ed., 1857, ii. p. 76.

Two most excellent observers place the skulls of Arabs in the dolichocephalic series. RETZIUS, *Blick*. S. 9. VAN DER HOEVEN, *Catalogus*, p. 25. See *Brit. and For. Med.-Chir. Rev.* 1860, p. 90. The four Arab skulls of the Mortonian collection are, however, brachycephalic. MEIGS, *Catalogue*, p. 34. And Prof. VON DÜBEN, who has visited Muscat and Aden and seen the Arabs of Arabia (for Arab itself is much of a generic term), tells me that they are a brachycephalous people. In the very interesting account of the Kahtānic race of Omān, by Mr. W. G. PALGRAVE, contained in his brilliant 'Narrative'², he points out their

¹ *Zur Architectur des Menschenschädels*, 1857, fol., S. 69.

² *Narrative of a Year's Journey through Central and Eastern Arabia*, 1865, i. p. 452, ii. p. 271.

psychological differences from the Northern and Central races of the peninsula. He also dwells upon the contaminating influences, on their blood, of the numerous Negroes continually imported into Omān. As far as can be determined from cranial forms, No. 381 appears to be particularly free from all African admixture.

F. RACES OF CEYLON.

1. *Vedahs*.

1. 313. *Vedah*. *Batticaloa*. ♂, æt. e. 40.

A 64, B 19·7, C 14·2, *a* 5·1, *b* 4·7, *c* 4·5, D 13·8, E 6·9, F 5*p*, *a* 4·2, *b* 4·6, *c* 4·1, G 5·2, *a* 4·8, *b* 4·7, *c* 3·9, H 4·5, I 5·1, J 7·2, K 75.

Has a large stain of verdigris about the right mastoid, from some copper ornament which has been interred with him.

2. 313*a*. *Vedah*. Right humerus. Length 12·1 in.

3. 400. *Vedah*. ♀, of considerable age. Imperf. calv.

B 19·8, C 14·8, *a* 4·8, *b* 5·3, *c* 4·7, E 7·3, F 5*p*, *a* 4·4, *b* 4·6, *c* 4, G 5·5, *a* 4·8, *b* 5, *c* 4, J 6·8, K 75.

There is an exostosis on the left side of the frontal, another on the left parietal; and the *alveoli* are totally effaced, the walls of the *antra* being reduced to the thickness of a mere pellicle.

4. 741. *Vedah*. *Badulla*. ♀, æt. e. 16. Imperf. calv.

B 18·8, C 14, *a* 4·8, *b* 4·9, *c* 4·3, D 13·1, E 6·7, F 4·8*t*, *a* 4·3, *b* 4·2, *c* 3·9, G 5·1, *a* 4·5, *b* 4·6, *c* 4, J 7·1, K 75.

5. 742. *Vedah*. *Badulla*. ♀, of uncertain age. Imperf. calv.
B 19·2.

6. 801. *Vedah*. ♂, æt. e. 45.

A 70, B 19·6, C 14·4, *a* 5, *b* 5·3, *c* 4·1, D 13·7, E 7·1, F 4·9*p*, *a* 4·3, *b* 4·3, *c* 4·1, G 5·2, *a* 4·5, *b* 4·6, *c* 4, H 4·2, I 4·8, J 6·9, K 73.

This skull is synostotic. First, there is a complete ossification of the sagittal suture, producing cylindrocephalism; and, secondly, obliteration of the spheno-parietal and the lateral portions of the coronal sutures, on each side, which has occasioned klinocephalism, marked by a depression quite across the fore part of the parietal bones. The central division of the lambdoid suture also is nearly closed.

7. 802. *Vedah*. *Batticaloa*. ♀, æt. e. 45.

A 56, B 17·8, C 13·7, *a* 4·7, *b* 4·9, *c* 4·1, D 13·1, E 6·2, F 4·7*p*, *a* 3·9, *b* 4·1, *c* 4·1, G 5·2, *a* 4·3, *b* 4·5, *c* 3·6, H 3·9, I 4·7, J 7·5, K 83.

8. 803. Vedah. *Batticaloa*. ♀, æt. e. 18.

A 65, B 18·7, C 14, *a* 4·7, *b* 5, *c* 4, D 13·8, E 6·6, F 5·2*p*, *a* 4·3, *b* 4·9, *c* 4, G 5·3, *a* 4·6, *b* 4·7, *c* 3·8, H 3·8, I 4·7, J·78, K·80.

Has one of the *processus papillares* of Prof. H. J. HALBERTSMA, on the left side, before the foramen magnum.

9. 804. Vedah. *Batticaloa*. ♀, æt. e. 15.

A 64, B 19·8, C 14·7, *a* 5·2, *b* 5·1, *c* 4·4, D 13·3, E 7·4, F 5·2*p*, *a* 4·1, *b* 4·9, *c* 3·6, G 5, *a* 4·3, *b* 4·3, *c* 3·9, H 3·6, I 4·5, J·70, K·67.

This cylindrocephalic skull of a young girl presents an interesting example of *synostosis*. The *klinocephalus*, or saddle-head of LUCÆ. The squamous suture is, on both sides, quite ossified, and its situation entirely obliterated, together with the lower portion of the right half of the lambdoid; whilst the sphenotemporal, -parietal, and -frontal sutures still remain open. The result of the premature closure of the squamous sutures has been a symmetrical contraction of the parietal bones, closely resembling the "*tête annulaire*." Between the coronal suture and the protuberances the parietal bones present a hollow depression running quite across the calvarium.

10. 805. Vedah. *Ouvah*. ♂, apparently very aged. Calv.

A 81, B 20·9, C 16, *a* 5·3, *b* 5·2, *c* 5·5, D 15·2, E 7·6, F 5·2*t*, *a* 4·4, *b* 5, *c* 4·2, G 5·6, *a* 5, *b* 5·1, *c* 4·4, I 5, J·68, K·73.

Abnormally large, very long, tall, narrow, and rather heavy. The sutures surrounding the great alæ of the sphenoidal, the lower portions of the sides of the coronal, and parts of the squamous sutures are ossified. But this synostotic state of the bones has not produced that degree of deformity which exists in No. 804: although premature, it has most likely not taken place at so early a period of life. The *alveoli* are extremely absorbed, even to the level of the bony palate, as in No. 400. Such a total effacement seems to be the result of disease, rather than of old age. I am confirmed in this view by finding that, in two of the Vedah skulls in the possession of Mr. BUSK, the same state of absorption exists, and that, in a photograph of a Batticaloa Vedah woman, who appears to be not more than 35 years of age, if so much, which I owe to Mr. Jno. BAILEY of Colombo, the *alveoli* are obviously wanting.

11. 806. Vedah. *Ouvah*. ♀, æt. e. 20. Calv.

A 59, B 18·7, C 14·2, *a* 4·8, *b* 4·9, *c* 4·5, D 13, E 6·9, F 4·6*p*, *a* 3·9, *b* 4·4, *c* 3·8, G 5, *a* 4·5, *b* 4·6, *c* 4, I 4·3, J·66, K·72.

Nos. 313, &c., to 806 presented by Mr. Chas. Peter LAYARD, Colombo, Ceylon.

12. 1213. Vedah. ♀, æt. e. 70. Calv.

A 72·5, B 19·2, C 14·4, *a* 4·8, *b* 5·2, *c* 4·4, D 14·5, E 6·7, F 5·1*p*, *a* 4·4, *b* 5, *c* 3·9, G 5·5, *a* 4·8, *b* 4·9, *c* 3·8, I 4·7, J·76, K·82.

13. 1213*a*. Vedah. Lower jaw. *b*. Right femur, 17·2 inches long. *c*. Right humerus, 12 inches long.

This series of about half a score of erania of the small Aborigines of Ceylon is of great interest. It presents a combination of skull-forms which also prevails to some extent among the tribes of the neighbouring peninsula, but which is peculiar to the races of these parts of the world. The erania are small, often marvellously so; narrow, narrower than those of African Negroes, and sometimes as narrow as those of New Caledonians; of a long oval outline; dolichocephalic (the only tendency to brachycephalism in the series is in the aberrant example of the young woman, No. 803); tall, tolerably orthognathous, and not depressed in the forehead, although laterally contracted, and with less prominent zygomata than African races.

References.—*Cat. Osteol. Series, Mus. R. Coll. Surg. Engl.*, No. 5539, Cranium of Veddah. *Observations on some Skulls of Ceylon, said to be those of Veddahs.* By George Busk, F.R.S. *Proc. Linn. Soc.* 1862, vi. p. 166.

2. Cingalese.

1. 315. Cingalese. *Pantura*. ♀, æt. e. 40.

A59, B18·8, C14·2, *a* 4·6, *b* 5·2, *c* 4·4, D13·2, E 6·8, F4·9*p*, *a* 4, *b* 4·6, *c* 4, G 4·8, *a* 4·4, *b* 4·5, *c* 4, H 4·3, I 4·5, J·72, K·70.

A long and rather narrow, prognathous skull, with remarkably small but upright forehead, the teeth of which are brilliant with betel.

2. 979. Cingalese. ♀, æt. 48.

D.C.

A70, B19·7, C14·9, *a* 5·2, *b* 5·3, *c* 4·4, D14·2, E 7, F5·2*p*, *a* 4·3, *b* 5, *c* 3·9, G 5·5, *a* 4·7, *b* 4·9, *c* 4, H 3·6, I 4·6, J·74, K·78.

Insane; died of apoplexy; indications of disease on the *os frontis*.

3. 980. Cingalese. ♂, æt. 70.

D.C.

A 62, B 18·4, C 13·8, *a* 5·1, *b* 5, *c* 3·7, D 14·2, E 6·5, F 5*p*, *a* 4, *b* 4·6, *c* 3·9, G 5·4, *a* 4·6, *b* 4·8, *c* 3·5, I 4·9, J·76, K·84.

Alveoli wholly absorbed in both *maxillæ*.

4. 981. Cingalese. ♀, æt. e. 60.

D.C.

A68, B19·4, C14·6, *a* 5·2, *b* 5·3, *c* 4·1, D14·1, E6·9, F5·2*p*, *a* 4·3, *b* 4·8, *c* 3·9, G 5·1, *a* 4·6, *b* 4·8, *c* 4·1, H 4·1, I 4·6, J·75, K·74.

5. 982. Cingalese. ♀, æt. e. 50.

D.C.

A74, B19·6, C 14·7, *a* 5·2, *b* 4·9, *c* 4·6, D13·3, E 7·2, F4·7*p*, *a* 4, *b* 4·2, *c* 3·8, G 5·2, *a* 4·4, *b* 4·4, *c* 3·8, H 4, I 4·9, J·65, K·72.

There exists a degree of microcephalism in this skull. The

sides of the coronal suture are prematurely obliterated; the central parts of the lambdoid and the sagittal sutures nearly so. The result is a somewhat cylindrical *klinocephalus*. It also presents on the left side, immediately before the occipital foramen, one of the *processus papillares* of HALBERTSMA.

6. 983. Cingalese. ♀, æt. c. 60. D.C.

A75, B19·8, C14·5, a5·1, b5·2, c4·2, D14·2, E7·1, F5·1_p, a4·5, b4·8, c3·9, G5·7, a4·8, b4·9, c3·9, H4·6, I5, J·70, K·80.

The calvarium is awry from parieto-occipital flattening towards the right side.

7. 984. Cingalese. ♂, æt. c. 60. Calv. D.C.

A84, B20·8, C15·5, a5·1, b5·4, c5, D15·7, E7·6, F5·7_p, a4·6, b5·4, c4·2, G5·8, a5·1, b5·1, c4·3, I5·1, J·75, K·76.

8. 1007. Cingalese. Candy. ♂, æt. c. 70. D.C.

A81, B21·5, C15·7, a5·5, b5·4, c4·8, D14·7, E7·7, F5·6_t, a4·9, b5·2, c4, G5·3, a4·7, b4·7, c4·2, H5·1, I5·2, J·72, K·70.

Has a large conical exostosis on the middle of the upper third of the frontal bone.

9. 1008. Cingalese. Negombo. ♂, æt. c. 80. D.C.

A85, B21·6, C15·9, a5·5, b5·5, c4·9, D15, E7·8, F5·7_t, a4·7, b5·1, c4·5, G5·8, a4·9, b5, c4·4, I5·2, J·73, K·74.

10. 1009. Cingalese. Colombo. ♂, of middle age. Calv. D.C.

A64, B20, C14·8, a5·3, b5·2, c4·3, D14·8, E7·2, F5·2_p, a4·3, b4·9, c4·1, G5·5, a5, b5, c4, I5, J·72, K·76.

Considerably affected with hyperostosis. Weighs 37 oz. av. Sutures ossified.

11. 316. Cingalese of mixed race. Malabar and Cingalese. Negombo. ♂?, æt. c. 35.

A66·5, B18·7, C13·8, a4·8, b4·9, c4·1, D14·3, E6·6, F5·1_p, a4·4, b4·7, c4·1, G5·2, a4·6, b4·7, c3·9, H4, I4·8, J·77, K·78.

Has a lock of coarse black hair still attached to it.

12. 1343. Cingalese. Brahmin. ♂, æt. c. 35. V.L. d. J.

A81, B20·9, C15·2, a5·3, b5, c4·9, D15·3, E7·4, F5·4_p, a4·9, b5, c4·2, G5·8, a4·9, b5·1, c4·3, H4·7, I5·3, J·73, K·78.

An exceptionally large skull, which has a slight indication of a longitudinal suture in each malar bone.

Reference.—SANDIFORT, *Tab. Cran. div. Gent.* "Cranium Cingalensis."

Average measurements of 4 Cingalese ♂ skulls. A 78, B 20·5, C 15·2, a 5·3, b 5·3, c 4·6, D 14·9, E 7·4, F 5·5, a 4·5, b 5, c 4·1, G 5·4, a 4·8, b 4·9, c 4·4, H 5·1, I 5·1, J 7·4, K 7·3.

Extremes, A 62–85, J 72–76, K 70–84.

Average measurements of 4 Cingalese ♀ skulls. A 68, B 19·4, C 14·5, a 5, b 5·2, c 4·2, D 13·8, E 6·9, F 5·1, a 4·2, b 4·8, c 3·9, G 5·2, a 4·6, b 4·7, c 4, H 4·1, I 4·6, J 7·3, K 7·5.

Extremes, A 59–75, J 70–75, K 70–80.

Average measurements of 8 Cingalese ♂ and ♀ skulls. A 73, B 19·9, C 14·8, a 5·1, b 5·2, c 4·4, D 14·3, E 7·1, F 5·3, a 4·3, b 4·9, c 4, G 5·3, a 4·7, b 4·8, c 4·2, H 4·6, I 4·8, J 7·4, K 7·4.

3. Other Races.

1. 314. Malabar, or Tamilman. ♂, æt. e. 40.

A 69, B 19·5, C 13·9, a 5·1, b 4·8, c 4, D 14·3, E 6·8, F 5·4p, a 4·6, b 5·2, c 4, G 5·2, a 4·6, b 4·7, c 3·5, H 4·2, I 4·9, J 7·9, K 7·6.

2. 317. Marakkala, or Moorman. Colombo. ♂, æt. e. 35. Mahometan.

A 75, B 20·3, C 15·2, a 5·2, b 5·2, c 4·8, D 14·7, E 7·4, F 5·2p, a 4·5, b 4·9, c 4·1, G 5·3, a 4·7, b 4·8, c 4·2, H 5·1, I 4·7, J 7·0, K 7·1.

3. 318. Malay. Mahometan. Colombo. ♂, æt. e. 40.

A 72, B 19·5, C 14·2, a 4·9, b 4·6, c 4·7, D 14·6, E 6·8, F 5·4p, a 4·5, b 5·2, c 4·1, G 5·2, a 4·9, b 4·8, c 4·2, H 5·2, I 4·8, J 7·9, K 7·6.

G. RACES OF NORTH-WESTERN INDIA.

864. Mussulman. "HASSAN KHAN." ♂, æt. e. 30. Calv. D.C. A 75, B 20·2, C 14·8, a 5·2, b 4·6, c 5, D 15·1, E 6·9, F 5·5p, a 4·7, b 4·7, c 4·4, G 5·7, a 4·8, b 5, c 4·1, I 5·4, J 7·9, K 8·2.

"HASSAN KHAN" was an East-Indian Officer, distinguished for his personal bravery and his great skill in using the sword. He was killed in battle. It is believed that he was a native of N.W. India" (Dr. J. P. BROWNÉ).

This is a rather small, thick, and heavy calvarium, quite unlike that of the Hindoo race. Has an oblique sword-cut (1·5 in. long) across the frontal (an injury which has been partly repaired), and another, slighter, at the posterior inferior angle of the left parietal. The nose is long and elevated, the nasals and nasal processes of the superior maxillaries also being broad, and

the forehead narrow and very sloping. The notch at the base of the left outer pterygoid process is converted into a foramen. The semicircular lines marking the attachment of the temporal fasciæ are high up, and the muscular attachments are prominent and scabrous. The occipital region is slightly unsymmetrical.

1000. East-Indian. "SEEDÉE ALMAS." ♂, æt. e. 40. D.C.
A68, B19·2, C14·3, *a* 5, *b* 4·8, *c* 4·5, D14·8, E6·5, F5·3_p, *a* 4·5,
b 5, *c* 4·1, G5·4, *a* 4·6, *b* 4·9, *c* 3·8, H5·4, I5·2, J·81, K·83.

This fine skull, of which I regret I cannot gain any further history than the note communicated by Dr. J. P. BROWNE, that "Seedée ALMAS was a distinguished East-Indian Officer," is remarkable for its low and retreating forehead and its Negroid prognathousness. In fact, its profile, from the middle of the parietals to the point of the chin, almost forms a large but irregular segment of a circle. The nasals are very narrow, but raised on broad, elevated, and arched processes of the superior maxillaries. There is a nodular exostosis on the outside of the right mastoid. The jaws are wide and massive, and the large teeth are slightly stained with betel.

H. RACES OF AFGHANISTAN.

1. *Afghans.*

1. 1254. Afghan. *Yusufzai Tribe.* ♂, æt. e. 30. Peshawar Valley.

A65, B19·9, C14·1, *a* 4·7, *b* 4·7, *c* 4·7, D14·1, E7·2, F5·3_p, *a* 4·3,
b 5·1, *c* 4, G5·2, *a* 4·5, *b* 4·5, *c* 4, H4·7, I5, J·73, K·72.

Has had a sword-cut, received shortly before death, across the left parietal, and another, at an earlier period, across the middle of the nasals.

A small, feminine-looking, narrow, prognathous skull, with an aquiline nose, prominent in the supra-occipital region.

2. 1255. Afghan. *Yusufzai Tribe.* ♂, æt. e. 45. Bonair.
A95, B21·8, C15·1, *a* 5·2, *b* 5·3, *c* 5·6, D15·5, E7·7, F6_p, *a* 4·9,
b 5·8, *c* 4·8, G5·4, *a* 4·5, *b* 4·5, *c* 4·3, H4·8 I5·4, J·78, K·70.

This fine, megaloecephalic skull exhibits signs of a former injury, in a slight depression immediately above the left supraciliary ridge, and has lost the upper middle incisor on the left side, the only one absent, at a very early period of life. It must exceed the average size. It is the cranium of one of the learned class, a priest.

3. 1256. Afghan. *Yusufzai Tribe*. ♂, æt. c. 55. Peshawar Valley.

A65, B20·1, C14·2, *a*4·7, *b*4·7, *c*4·5, D14·2, E7·3, F5·2*p*, *a*4·4, *b*5·1, *c*4·2, G5·2, *a*4·5, *b*4·6, *c*4·3, H4·8, I5, J·71, K·71.

This skull has received a spear-wound in the coronal suture on the left side. It very closely resembles No. 1254 in almost every respect; and both are derived from a graveyard in which were interred those of the Afghans who were slain in a fight, some 40 or 50 years ago, between them and the Sikhs.

4. 1448. Afghan. *Yusufzai Tribe*. ♀, æt. c. 35.

A61, B19·2, C13·5, *a*4·5, *b*4·8, *c*4·2, D13·7, E6·8, F5·3*p*, *a*4·3, *b*5·1, *c*3·8, G5·2, *a*4·3, *b*4·4, *c*3·8, H4·2, I4·8, J·78, K·76.

Has a large triquetral bone in the left limb of the lambdoid suture, and small paramastoid processes.

All these skulls of Afghans are dolichocephalic, although Nos. 1255 and 1448 are inclined to be short.

5. 1470. Afghan. ♀, æt. c. 30. Cabul.

A59, B18·3, C12·9, *a*4·7, *b*4·3, *c*3·9, D14·1, E6·1, F5·4*p*, *a*4·4, *b*5·2, *c*4, G4·9, *a*4·4, *b*4·4, *c*3·3, H4·3, I4·6, J·88, K·80.

Has a series of small nodular exostoses on the frontal bone, and a symmetrical parieto-occipital flattening.

6. 1471. Afghan. ♀, æt. e. 50. Cabul.

A62, B18·9, C13·5, *a*4·7, *b*4·5, *c*4·3, D14·2, E6·4, F5·4*p*, *a*4·5, *b*5, *c*3·8, G5, *a*4·4, *b*5, *c*3·6, H4·5, I4·9, J·84, K·77.

These two small, brachycephalic skulls of women were obtained from a grave at Cabul, by a Mahmand Afghan. There is a doubt whether they may not be those of a Tajik tribe inhabiting Cabul and the country between it and Ghazni, who are of small stature and delicate frames. These people are considered to be a race between the Tajiks and Moguls; they speak Persian.

The crania of Afghans are very rare in museums; and those here enumerated present great diversities. Further specimens may decide which is the *typical* form of the Afghan skull. The present examples do not afford craniological support to the Jewish origin of this turbulent race, which has been thought by Mr. H. W. BELLEW, who has brought great knowledge and a very acute judgment into the ample field of observation he has enjoyed, to be the most probable (*Journal of a Mission to Afghanistan in 1857, 1862*, 8vo, Chapter II.). The character of the Afghans seems to be singularly at variance with that of the Jews; and every other reason given for associating the two peoples appears to admit of ready explanation, without any con-

nexion of race whatever. This is said with all deference and respect by one who has no personal knowledge of the Asiatic tribes. There are 15 Baluchi and Afghan skulls in the Army Medical Museum. Dr. WILLIAMSON describes them as "large, very good specimens of the oval-shaped skulls, and resembling the best-formed Greek or European" (*Observations*, p. 15). I have reason to believe that they will be found to be decidedly small, save exceptional examples, as No. 1255.

Reference.—H.W. BELLEW, *A General Report on the Yusufzais*, Lahore, 1864.

2. *Kafirs of Kafiristan*¹.

1. 1257. *Kafir. Waigal Tribe.* ♂, æt. c. 60.

A80, B21·2, C14·7, a5·1, b5·1, c4·5, D14·3, E7·4, F5·6p, a4·7, b5·3, c4·2, G5·4, a4·5, b4·6, c4·2, H5, I5·5, J·75, K·73.

A fine, large, oval skull, but rather low, with long face and aquiline nose. It might be supposed that we are amongst fighting races whose hand is against every man, as, in truth, we are. This cranium presents the mark of a former injury above the right supraciliary ridge. Such a specimen of the skull of a Kafir, of Kafiristan, is most likely unique. I have been very politely instructed by Mr. BELLEW respecting this remote people. He tells me, "The Kafirs, so called by their neighbours, being without national name of their own, are settled on the southern slopes of the Hindû Kûsh, in the narrow valleys from which descend the many mountain-streams that unite to form the Kabul River, before it passes through the range of Khaibar Mountains to join the Indus, at Attock. They form a number of small communities, dwelling in the separate valleys from which they are named, each having its own peculiar dialect and customs." They have by some been supposed to be the descendants of the Greek colonists left at Kabul by ALEXANDER the Great; but Mr. BELLEW is convinced that they are Hindûs in their origin. "In outward appearance the Kafirs have something of a European look, but not more so than many other Hindû tribes of the Himalayan range. Some of them are very dark, and others very fair, but the majority are of wheat-colour."

2. 1446. *Kafir.* ♂?, æt. e. 35. Calv.

A73, B20·1, C14·5, a5·2, b4·6, c4·7, D13·8, E7, F5·5p, a4·6, b5·1, c4, G5·1, a4·4, b4·4, c3·7, I4·9, J·78, K·72.

3. 1447. *Kafir.* ♀, æt. c. 6.

A fine asymmetrical skull of a child in its second dentition.

¹ Sia-posh Kafirs, or Kafirs of the Hindû Kûsh.

3. *People of Kashkar*¹.

1. 1443. Kashkar, native of. ♂, æt. c. 45. Calv.
B 19·7, C 14, *a* 4·8, *b* 5·2, *c* 4, D 14·1, E 6·9, F 5·1*t*, *a* 4·4, *b* 4·6,
c 4·1, G 5·3, *a* 4·5, *b* 4·6, *c* 3·8, I 5·2, J 74, K 76.
2. 1444. Kashkar, native of. ♀, æt. c. 40.
B 19·3, C 14, *a* 4·8, *b* 4·7, *c* 4·5, D 14·8, E 6·7, F 5·3*p*, G 5·3, *a* 4·7,
b 4·8, *c* 3·8, H 4·8, J 79, K 79.
3. 1445. Kashkar, native of. ♀, adult. Imperf. calv.
B 19·5, C 14·3, *a* 4·9, *b* 4·9, *c* 4·5, D 13·4, E 7, F 5*p*, *a* 4·4, *b* 4·8,
c 4, G 5·1, *a* 4·5, *b* 4·5, *c* 3·8, J 71, K 72.

4. *Other Races.*

1. 1258. Hazarah. *Jaghori Tribe*. ♂, æt. c. 60. Ghazni.
A 78, B 20·3, C 14, *a* 4·6, *b* 4·9, *c* 4·5, D 15·2, E 6·7, F 5·8*p*, *a* 4·9,
b 5·2, *c* 4·2, G 5·5, *a* 4·6, *b* 4·8, *c* 3·9, H 4·7, I 5·2, J 86, K 82.

A fine, large skull of singular proportions, very brachycephalic, and quite different from the others here described of races of Afghanistan.

"The Hazarah occupy the mountain-region from Ghazni (N.W.) to the Herat and Mashod districts. They are *distinctly Tartars in feature*, and always either wheat-coloured or yellow; sometimes florid like Europeans, but never black like the Ghorkas of Nepal, to whom they bear a striking resemblance in physiognomy and general build" (ELPHINSTONE'S *Cabul*, Book IV. chap. ii.; contains a good portrait of a Hazarah man).

2. 1259. Persian (Mughal). *Kazilbash Tribe*². ♂, æt. c. 40. Kabul.

A 66, B 19·8, C 14·1, *a* 4·9, *b* 4·8, *c* 4·4, D 13·9, E 7, F 5·1*p*, *a* 4·5,
b 4·7, *c* 4·1, G 5·2, *a* 4·5, *b* 4·5, *c* 3·9, H 4·6, I 5·4, J 72, K 74.

A small, regular skull, with a very prominent aquiline nose.

"The Kazilbash Mughal is a tribe of Turki descent. They have a strong colony in Kabul, which was planted there about a century and a half ago by NADIR SHAH. They generally speak Persian, and live after the manner of Persians; but their mother-tongue is Turki, and there are few who do not know how to speak it. They are hardly to be distinguished from the modern Persians in outward appearance. Yet the difference between the Osmanlis and Persians is very decided. They seem to be quite distinct peoples."

¹ Kashkar is a *country* contiguous to Kafiristan, and is situated on the southern slopes of the great chain of the Hindû Kûsh.

² Kuzzil-bash, red-head, or red-cap. Turkish.

A great deal has been written by learned and speculative ethnologists about the Turks and their vastly spread tribes, and much importance has been attached to the arguments deduced from such dissertations; hence it may be of moment to add that this skull has no resemblance whatever to the skull of a European Turk.

Nos. 1254 to 1259 procured by Mr. H. W. BELLEW, Medical Officer to the Political Mission to Afghanistan, in 1857.

Reference.—BLUMENBACH, *Dec. Cran. Tab. xxxv.*, "Persae."

I. RACES OF BENGAL.

a. *Hindoos*¹.

1. 484. Hindoo. "KISSEN GANGULA." ♂, æt. c. 40. *Brahmin*. (No. 26.)

A 73, B 19·7, C 14·4, *a* 5, *b* 4·6, *c* 4·8, D 14·9, E 6·8, F 5·4_p, *a* 4·5, *b* 5·3, *c* 4·1, G 5·1, *a* 4·6, *b* 4·7, *c* 4, H 4·8, I 5·1, J·79, K·75.

The family of GANGULA, or GANGOOLY, is distinguished in the Brahminical caste.

2. 485. Hindoo. "KAMURAM DEO." ♂, æt. c. 45. *Kshatrya*. A 64, B 18·8, C 13·2, *a* 4·4, *b* 4·6, *c* 4·2, D 13·9, E 6·8, F 5·1_t, *a* 4·6, *b* 4·2, *c* 3·9, G 5·3, *a* 4·4, *b* 4·5, *c* 3·9, H 4·4, I 5·1, J·75, K·77.

This small skull is remarkable for its short face, and low, recedent forehead. Presents distinct traces of annular deformation, and has a large interparietal bone formed of two unequal portions, the right angle being cut off by an oblique suture. It resembles JACQUART's fig. 5 (*De la valeur de l'os épactal*).

3. 486. Hindoo. "KISSEN CHUNDER DAS." ♂, æt. c. 40. *Chundal*, Ryot. (No. 31.)

A 73, B 19·8, C 14·5, *a* 5·1, *b* 4·9, *c* 4·5, D 15·1, E 6·9, F 5·4_p, *a* 4·4, *b* 5·2, *c* 4·1, G 5·4, *a* 4·6, *b* 4·7, *c* 4, H 5, I 5·2, J·78, K·78.

An exceedingly wry skull (*plagiocephalus*), the obliquity extending distinctly to the bones of the face—the left superior maxillary and malar bones and the orbit being decidedly in advance of the right. These asymmetrical, oblique crania are very common among Hindoos, and are no doubt occasioned by some peculiarity of nursing in early infancy. As elsewhere, they present a flattening on one side of the occipital region and a

¹ The term Hindoo, or Hindû, is used here for a native of India not otherwise distinguishable.

reciprocal flattening on the opposite side of the frontal region. KISSEN CHUNDER DAS was a "Chundal," or a man of very low caste. He died in the Insane Hospital at Daeca.

4. 487. Hindoo. "RAM NARAIN MANGIE." ♂, æt. e. 35. (No. 30.) *Chundal*. A boatman.

A69, B19·5, C14·3, a5·2, b4·9, c4·2, D14·8, E6·8, F5·5p, a4·4, b5·2, c4·2, G5·3, a4·7, b4·8, c3·9, H4·2, I4·9, J·80, K·77.

Slightly asymmetrical from early occipital flattening.

5. 488. Hindoo. "HINDU BURNHU," a countrywoman. ♀, æt. e. 35.

A65, B19·3, C14·3, a4·8, b5·3, c4·2, D13·7, E6·8, F5·2p, a4·2, b4·9, c3·9, G5·4, a4·5, b4·6, c3·9, H4·5, I4·8, J·76, K·79.

More obliquely asymmetrical than No. 487.

6. 489. Hindoo. "MURAND." ♀, æt. e. 45. *Fakir*¹. (No. 34.)

A62, B18·8, C13·9, a5, b5, c3·9, D13·6, E6·8, F5·1p, a4·4, b4·7, c3·8, G5·3, a4·5, b4·5, c3·5, H4·2, I4·9, J·75, K·77.

7. 490. Hindoo. "MOSUMAUT UMA." ♀, æt. e. 40. (No. 23.) *Chundal* caste.

A66, B19·4, C14·8, a5·1, b5·4, c4·3, D13·7, E7·1, F4·9p, a4·3, b4·5, c3·8, G5, a4·6, b4·6, c4·1, H4·2, I4·5, J·69, K·70.

8. 491. Hindoo. "SURIA," a fisherman. ♂, æt. e. 40. (No. 20.)

A67, B19·2, C14·1, a5, b4·8, c4·3, D14, E6·8, F5·2p, a4·5, b5, c3·7, G5·4, a4·6, b4·7, c3·8, H5·1, I5·4, J·76, K·79.

An extremely oblique asymmetrical skull (*plagiocephalus*), with a prominent aquiline nose, of a lunatic. There has been considerable caries of the alveolus of the left upper outer incisor.

9. 503. Hindoo. "MAGNAT." ♂, æt. e. 40. *Fakir*.

A66, B19·5, C14·3, a4·7, b5·1, c4·5, D14, E6·9, F5·1p, a4·4, b4·8, c3·9, G5, a4·4, b4·5, c3·8, H4·6, I5·2, J·74, K·72.

Has a diamond-shaped epaetal bone.

¹ The Fakirs (strictly the Muhammadan name for one who has taken upon himself a vow of poverty; the Hindoo names are various) are religious devotees, who make different vows to the gods, prefer a life of idleness and mendicancy, with the imaginary sanctity with which it is supposed to be invested, to labour and its earned emoluments, and who live upon the weaknesses of their deluded fellow-creatures. They are not confined to the male sex, but include both *men* and *women*, and, such is the contagious nature of fanaticism among all races, embrace both *Hindoos* and *Mussulmans*. They figure in most collections of Indian drawings and engravings. There are representations of four in Prince Alexis SOLTYKOFF's *Indian Scenes and Characters*, 1858, fol.

10. 505. Hindoo. "NEEMARE PAUL." ♂, æt. 50. Shopkeeper. (No. 12.)

A 81, B 20·2, C 14·3, *a* 5, *b* 5·1, *c* 4·2, D 15·3, E 6·9, F 5·6*p*, *a* 4·7, *b* 5·3, *c* 4, G 5·4, *a* 4·7, *b* 4·9, *c* 4, H 5, I 4·8, J 81, K 79.

Has occipital obliquity, and is remarkable for its long and very narrow face. Died of paralysis in the Native Hospital at Dacca.

11. 506. Hindoo. "SOLABBA." ♀, æt. e. 30.

A 69, B 19·5, C 14·8, *a* 5, *b* 4·8, *c* 5, D 13·6, E 7, F 4·9*p*, *a* 4·4, *b* 4·8, *c* 3·9, G 5·2, *a* 4·4, *b* 4·5, *c* 4, H 4·2, I 4·8, J 70, K 74.

The frontal bone has been the seat of a tumour, and the left coronoid process of the lower jaw is destroyed by the same disease. The teeth of these Hindoo skulls are all dyed with betel; this one, in which they are all present, brilliantly so.

12. 507. Hindoo. ♂, æt. e. 30. "*Brahmin*." A lunatic. (No. 28.)

A 73, B 20·1, C 14·9, *a* 5, *b* 5·3, *c* 4·6, D 14·7, E 7·1, F 5·2*p*, *a* 4·8, *b* 4·9, *c* 4, G 5·6, *a* 4·8, *b* 4·9, *c* 4, H 4·3, I 5·1, J 73, K 78.

13. 510. Hindoo. "NOBIKUTE." ♂, æt. e. 35. *Queboto*, or *Ryot*. A 59, B 18·8, C 14·4, *a* 5·1, *b* 5·1, D 14·2, E 6·8, F 5·2*p*, *a* 4·4, *b* 5, *c* 3·8, G 5·2, *a* 4·6, *b* 4·7, *c* 3·9, H 4·5, I 4·8, J 76, K 76.

There is no speno-parietal suture on the left side, and a very short one on the right. Has slight annular deformation.

14. 511. Hindoo. ♀, æt. e. 35.

C 14·5, *a* 5·1, *b* 5, *c* 4·4, D 14·3, E 7, F 5·3, *b* 4·8, *c* 3·9, G 5·5, *a* 4·8, *b* 4·8, *c* 4·2, H 4·6, I 4·7, J 75, K 78.

This imperfect cranium of a young woman presents the most formidable disease of the bones. The left half of the frontal, including the upper portion of the orbit, a part of the left parietal and the left alisphenoid, and portions of the bodies of the ethmoid and sphenoid have all been entirely destroyed; and there is a large penetrating cavity in the right parietal, near the sagittal suture.

15. 512. Hindoo. ♂, æt. e. 75.

A 76, B 19·4, C 14·9, *a* 5·3, *b* 5·3, *c* 4·3, D 14·5, E 6·8, F 5·3*p*, *a* 4·5, *b* 5, *c* 4, G 5·7, *a* 4·6, *b* 4·9, *c* 4, I 4·7, J 78, K 83.

16. 513. Hindoo. "BOGHAN CHOWDRIE." ♂, æt. e. 50. *Hanotsh*? A merchant or landholder. (No. 1.)

A 73, B 19·2, C 14·1, *a* 5·1, *b* 4·9, *c* 4·1, D 14·2, E 6·6, F 5*p*, *a* 4·5, *b* 4·6, *c* 4, G 5·4, *a* 4·5, *b* 4·8, *c* 4·1, H 4·8, I 4·8, J 75, K 81.

Died in the Insane Hospital at Dacca.

17. 515. Hindoo. "KUSNOMONEE." ♂, æt. c. 35. *Chundal*. (No. 3.)

A 75, B 19·6, C 14, *a* 5, *b* 4·6, *c* 4·4, D 15·2, E 6·9, F 5·5 *p*, *a* 4·8, *b* 5·3, *c* 4, G 5·4, *a* 4·7, *b* 4·6, *c* 4, H 4·6, I 5·1, J 7·9, K 7·8.

Insane. Wry, from occipital compression on the left side.

18. 516. Hindoo. ♂, æt. c. 70. (No. 30.)

A 68, B 19·1, C 14·2, *a* 4·8, *b* 5, *c* 4·4, D 14·3, E 6·7, F 5·3 *p*, *a* 4·4, *b* 4·9, *c* 3·7, G 5·4, *a* 4·6, *b* 4·8, *c* 4, I 4·5, J 7·9, K 8·0.

Exhibits the low parieto-occipital flattening on the right side, which renders the calvarium wry.

19. 517. Hindoo? ♀, æt. c. 30.

A 60, B 18·2, C 13, *a* 4·8, *b* 4·3, *c* 3·9, D 13·9, E 6·3, F 5·2 *p*, *a* 4·2, *b* 4·9, *c* 3·9, G 5·3, *a* 4·5, *b* 4·6, *c* 3·7, H 4·2, I 4·5, J 8·2, K 8·4.

A small brachycephalic skull of a woman, almost as tall as that of a Siamese.

20. 518. Hindoo. ♀, æt. c. 60.

A 70, B 19·5, C 14·4, *a* 4·6, *b* 5·2, *c* 4·6, D 14, E 7, F 5·1 *p*, *a* 4·2, *b* 4·5, *c* 4, G 5·3, *a* 4·5, *b* 4·6, *c* 4, H 4·2, I 5, J 7·2, K 7·5.

Has an unusual depression about the orifice of the posterior condyloid foramen of the occipital.

21. 519. Hindoo. ♀, æt. c. 50.

A 65, B 19·8, C 14·6, *a* 5, *b* 5, *c* 4·6, D 13·6, E 7·2, F 5·1 *p*, *a* 4·3, *b* 4·6, *c* 3·7, G 5·1, *a* 4·5, *b* 4·5, *c* 4, H 4·4, I 4·7, J 7·0, K 7·0.

This skull exhibits synostosis of the sides of the frontal with the parietal bones, by which a somewhat cylindrical form of the calvarium has been produced (*cylindrocephalism*). The remainder of the coronal suture, the sagittal, and the middle of the lambdoid are nearly obliterated.

22. 521. Hindoo. ♂, æt. c. 40.

A 68, B 19·9, C 14·5, *a* 5·3, *b* 4·8, *c* 4·4, D 14·2, E 7·2, F 5·2 *p*, *a* 4·4, *b* 4·7, *c* 4, G 5·2, *a* 4·6, *b* 4·7, *c* 4·3, H 4·8, I 5, J 7·2, K 7·2.

23. 522. Hindoo. ♀, æt. c. 50. Calv.

A 60·5, B 19, C 14, *a* 5·2, *b* 5, *c* 4, D 14·1, E 6·7, F 5 *p*, *a* 4·5, *b* 4·7, *c* 3·7, G 5·1, *a* 4·4, *b* 4·4, *c* 3·5, I 4·5, J 7·4, K 7·6.

24. 523. Hindoo. ♂, æt. c. 40.

A 76, B 20·3, C 14·6, *a* 5·3, *b* 5·3, *c* 4, D 15·2, E 7, F 5·6 *p*, *a* 4·7, *b* 5·1, *c* 4, G 5·5, *a* 5·1, *b* 4·9, *c* 3·7, H 4·7, I 5·1, J 8·0, K 7·8.

25. 524. Hindoo. ♀, æt. c. 50. Imperf. cran.

A 61·5, B 18·8, C 14·9, *b* 4·8, E 6·6, F 5, *a* 4·3, *b* 4·4, *c* 3·8, G 4·5, *b* 4·7, *c* 3·8, J 7·5.

A wry calvarium, from occipital flattening on the left side.

26. 525. Hindoo. ♀, æt. c. 60. (No. 9.)

A 62, B 19·5, C 14·6, *a* 5·1, *b* 4·9, *c* 4·6, D 13·3, E 7·1, F 4·8*p*, *a* 4·2, *b* 4·4, *c* 3·9, G 5·2, *a* 4·4, *b* 4·5, *c* 4·1, H 4·4, I 4·7, J 6·7, K 7·3.

A small, narrow, and long cylindrical cranium of a woman.

27. 526. Hindoo. "GUNGA BAGDENA." ♀, æt. c. 20.

A 65, B 18·9, C 13·8, *a* 4·6, *b* 5, *c* 4·2, D 13·6, E 6·7, F 5*p*, *a* 4·4, *b* 4·8, *c* 4, G 5·1, *a* 4·4, *b* 4·8, *c* 3·8, H 4·1, I 4·7, J 7·4, K 7·6.

This small and narrow skull of a young woman, of from 18 to 20 years of age, has a frontal suture. "GUNGA" professed herself a *Fakir*, and thus lent her support to the religion of her country. She was named after the sacred stream.

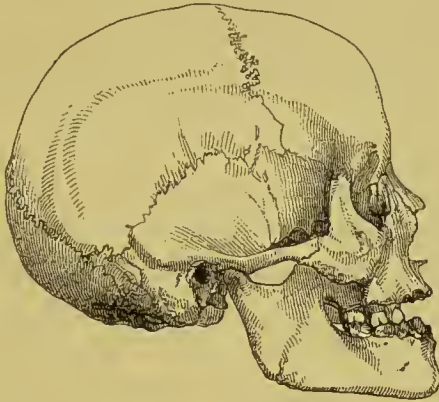


Fig. 73.—Cranium of "GUNGA BAGDENA," a *Fakir*.—No. 526.—Quarter-size.

28. 528. Hindoo. "DOKHU." ♀, æt. c. 22. *Chundal*. (No. 8.)

A 70, B 19·9, C 14·9, *a* 5·2, *b* 5·3, *c* 4·4, D 14·2, E 7·2, F 5·2*p*, *a* 4·5, *b* 4·8, *c* 4, G 5·4, *a* 4·6, *b* 4·7, *c* 4, H 4·2, I 5·1, J 7·2, K 7·5.

Has a large posterior condyloid foramen and fossa on the left side. Insane.

29. 529. Hindoo. ♀, æt. c. 35.

A 68, B 19·3, C 14·2, *a* 4·9, *b* 5·2, *c* 4·1, D 14, E 6·8, F 5·3*p*, *a* 4·5, *b* 5, *c* 4, G 5·4, *a* 4·5, *b* 4·7, *c* 3·9, H 4·2, I 4·9, J 7·8, K 7·9.

Has large posterior condyloid foramina on both sides, and large triquetral bones in the right squamous suture.

30. 530. Hindoo. ♂, æt. c. 30. Calv.

A 66, B 19·5, C 14·5, *a* 5·2, *b* 5·1, *c* 4·2, D 14·3, E 7, F 5*p*, *a* 4·3, *b* 4·8, *c* 4, G 5·3, *a* 4·6, *b* 4·7, *c* 3·9, I 4·9, J 7·6, K 7·6.

31. 531. Hindoo. ♀, æt. c. 50. Calv.

A 74, B 19·7, C 14·8, *a* 4·9, *b* 5, *c* 4·9, D 14·3, E 6·9, F 5·3*p*, *a* 4·4, *b* 5, *c* 4, G 5·3, *a* 4·6, *b* 4·8, *c* 4, I 4·8, J 7·6, K 7·6.

32. 532. Hindoo. ♂, æt. e. 40. Calv.
A 70, B 19·8, C 14·3, *a* 5, *b* 5, *c* 4·3, D 14·5, E 7, F 5·2*p*, *a* 4·4,
b 4·9, *c* 4·3, G 5·3, *a* 4·8, *b* 4·8, *c* 3·9, I 5, J 74, K 75.

33. 533. Hindoo. ♂, æt. e. 80.
A 76, B 20·4, C 15·3, *a* 5·3, *b* 5·6, *c* 4·4, D 14·5, E 7·3, F 5·4*p*, *a* 4·8,
b 5·1, *c* 4, G 5·7, *a* 4·9, *b* 5, *c* 4, H 4·1, I 5, J 74, K 78.

Nos. 484 to 533 (natives of N.E. Bengal) presented by Thos. Alex. WISE, M.D., of Belmont Castle, Perthshire, who was Medical Superintendent of the Hospitals at Dacca, where these crania were collected.

34. 853. Hindoo. ♀, æt. e. 16. Calv. D.C.
A 55, B 18·8, C 13·8, *a* 5, *b* 4·6, *c* 4·2, D 13, E 6·8, F 4·8*p*, *a* 3·9,
b 4·6, *c* 3·9, G 5, *a* 4·5, *b* 4·6, *c* 3·7, I 4·6, J 70, K 73.

Presented to DEVILLE by Dr. Geo. MURRAY PATERSON, Surgeon, Bengal.

35. 869. Bengalee. ♂, æt. e. 50. Calv. D.C.
A 74, B 20·2, C 14·9, *a* 5·1, *b* 5·3, *c* 4·6, D 14·8, E 7·2, F 5·4*p*, *a* 4·5,
b 5·2, *c* 4·1, G 5·7, *a* 4·9, *b* 4·9, *c* 4, I 5·2, J 75, K 79.

36. 870. Hindoo. ♂, æt. e. 30. Native of Benares. Calv. D.C.
A 72, B 19·6, C 15, *a* 4·9, *b* 5·1, *c* 5, D 15, E 6·8, F 5·3*p*, *a* 4·6, *b* 5,
c 4·1, G 5·6, *a* 4·8, *b* 4·9, *c* 4, I 5, J 78, K 82.

37. 871. Hindoo. ♀, æt. e. 2. Benares. Calv. D.C.
Nos. 869 to 871 presented to DEVILLE by Capt. PEEVER.

38. 883. Hindoo. ♀, æt. e. 5. Ghazcepoor. Calv. D.C.

39. 884. Hindoo. ♀, of good age. Imperf. calv. D.C.
A 63, B 19·8, C 14·6, *a* 5, *b* 5·5, *c* 4·1, D 13·3, E 7·4, F 4·8*t*, *a* 4·1,
b 4·4, *c* 4·3, G 4·9, *a* 4·7, *b* 4·7, *c* 3·9, J 64, K 66.

The singular proportions of this calvarium arise from *synostosis*. It is a *macrocephalus*, or long head, of LUCÆ. The sagittal suture, the lower portions of the coronal, and the sphenoparietal suture, on each side, are ossified and entirely effaced.

40. 885. Hindoo. ♀, æt. e. 20? Calv. D.C.
A 65, B 19·2, C 13·6, *a* 4·8, *b* 4·7, *c* 4·1, D 13·6, E 6·8, F 5*p*, *a* 4·1,
b 4·8, *c* 3·8, G 4·9, *a* 4·3, *b* 4·4, *c* 3·8, I 4·5, J 73, K 72.

41. 886. Hindoo. ♀, æt. e. 60. Calv. D.C.
A 59, B 19·1, C 14·1, *a* 5·1, *b* 4·9, *c* 4·1, D 13·2, E 6·9, F 4·9*p*, *a* 4·1,
b 4·8, *c* 4, G 4·9, *a* 4·4, *b* 4·3, *c* 3·6, I 4·6, J 71, K 71.

42. 887. Hindoo. ♀, æt. e. 40. Calv. D.C.
A 63, B 18·8, C 14, *a* 4·9, *b* 4·9, *c* 4·2, D 12·8, E 6·8, F 5*p*, *a* 4,
b 4·7, *c* 3·7, G 5, *a* 4·5, *b* 4·4, *c* 3·7, I 4·6, J 73, K 73.

43. 888. Hindoo. ♀, æt. c. 40. Calv. D.C.
A66, B19·2, C14·2, a4·9, b5·1, c4·2, D13·5, E6·9, F5p, a4·2,
b4·8, c4·1, G5, a4·5, b4·5, c3·7, I5, J·72, K·72.

44. 889. Hindoo. ♀, æt. c. 70. High-caste. Calv. D.C.
A77, B20·6, C14·9, a5·2, b4·9, c4·8, D14, E7·4, F5·3t, a4·3,
b4·8, c4·4, G5, a4·5, b4·5, c3·9, I5·3, J·71, K·67.

45. 890. Hindoo. ♂, æt. c. 60. Calv. D.C.
A64, B19·3, C14·1, a4·9, b5, c4·3, D14·5, E6·8, F5·2t, a4·6,
b4·7, c3·9, G5·5, a4·6, b4·7, c3·8, I5·1, J·76, K·80.

The external pterygoid process of the left side forms a thin plate of bone, pierced with a foramen, in continuation with another process of the sphenoid on the inside of the *foramina ovale* and *spinale*. The anomaly noticed by HYRTL.

Nos. 883 to 890 are natives of Ghazcepoor, on the Ganges, in the province of Allahabad, and were brought to DEVILLE by Capt. BLAKE, Aug. 1827.

46. 891. Hindoo. ♀, æt. c. 25. High-caste. Calv. D.C.
A62, B18·5, C13·4, a4·7, b4·6, c4·1, D13, E6·5, F4·9p, a4·1,
b4·4, c4, G5·1, a4·4, b4·5, c4, I4·7, J·75, K·78.

47. 892. Hindoo. ♀, æt. c. 18. Low-caste. Calv. D.C.
A64, B18·5, C13·5, a4·7, b4·8, c4, D13·6, E6·7, F5·1p, a4,
b4·9, c3·9, G5·1, a4·4, b4·5, c3·9, I4·6, J·76, K·76.

48. 893. Hindoo. ♀, æt. c. 70. High-caste. Calv. D.C.
A72, B19·3, C13·8, a4·8, b4·7, c4·3, D14·5, E6·7, F5·3p, a4·6,
b4·8, c4·1, G5·5, a4·5, b4·7, c4, I4·8, J·79, K·82.

49. 894. Hindoo. ♂, æt. c. 18. High-caste. Calv. D.C.
A77, B20·5, C14·8, a5, b5·3, c4·5, D14·6, E7·4, F5·4t, a4·5,
b5, c4·2, G5·6, a4·7, b4·9, c4·2, I5·2, J·73, K·75.

50. 895. Hindoo. ♂, æt. c. 50. Low-caste. Calv. D.C.
A70, B19·9, C14·5, a5, b5, c4·5, D14·8, E7·1, F5·3p, a4·4,
b4·8, c4, G5·6, a4·9, b4·9, c4, I5, J·74, K·79.

Nos. 891 to 895 presented to DEVILLE by Mr. BURTON, Sept. 1827.

51. 901. Hindoo. ♀, æt. c. 40. Calv. D.C.
A61, B18·6, C13·3, a4·5, b4·5, c4·3, D13·3, E6·6, F5p, a4·1,
b4·5, c4, G5·1, a4·2, b4·5, c4, I4·7, J·75, K·77.

Described as a murderer in DEVILLE's *Catalogue*.

52. 902. Hindoo. ♀, æt. c. 4. Calv. D.C.
Frontal suture open.

53. 903. Hindoo. ♀, æt. c. 30. Calv. D.C.
A58, B18·4, C13·6, a4·9, b4·8, c3·9, D13·3, E6·5, F5p, a4·3,
b4·7, c3·8, G5·1, I4·6, J·77, K·78.

54. (914.) Hindoo. ♀, æt. c. 25. Calv. D.C.
A72, B19·9, C14·7, a5, b5, c4·7, D14·1, E7·1, F5p, a4·5,
b4·7, c4, G5·5, a4·7, b4·8, c4, I4·9, J·70, K·77.

From BROOKES's collection, and inscribed in his autograph,
"From the banks of the Hoogly. Presented by Robert DAVEY,
Esq." See "Crâne d'un habitant des bords du Gange," VIMONT,
Traité de Phrénologie, Atlas, pl. cxviii. fig. 2.

55. 944. Hindoo. *Brahmin*. ♂, æt. c. 45. Calv. D.C.
A70, B19·5, C14·3, a4·6, b5·4, c4·3, D15·1, E6·7, F5·4p, a4·7,
b4·9, c4, G5·4, a4·7, b4·8, c3·8, I5·2, J·80, K·80.

"Skull of a Brahmin from Benares. Presented by Mr.
PENTLAND." *Catalogue*.

56. 949. Hindoo. ♀, æt. c. 60. Calv. D.C.
A54, B18·5, C13·8, a5, b4·7, c4·1, D12·7, E6·8, F4·7p, a3·9,
b4·2, c3·7, G5, a4·2, b4·2, c3·6, J·69, K·73.

57. 989. Hindoo. ♀, æt. c. 22. *Kuttack*. Calv. D.C.
A74, B20, C15·2, a5·3, b5·4, c4·5, D14, E7·3, F5·1p, a4·4,
b4·5, c4·1, G5·3, a4·6, b4·6, c3·9, I4·8, J·69, K·72.

"*Suttee* who was buried alive with her deceased husband,
CHOPO-GOMON, in the sands of Paré Juggurnauth, near the
great Temple, June 1826. Removed during the Feast in June
1827, by Rev. David GARROW, who sent it to his wife at
Lymington, Hants, of whom it was purchased by J. DEVILLE
in 1830." Inscription.

A long, narrow, and prognathous calvarium.

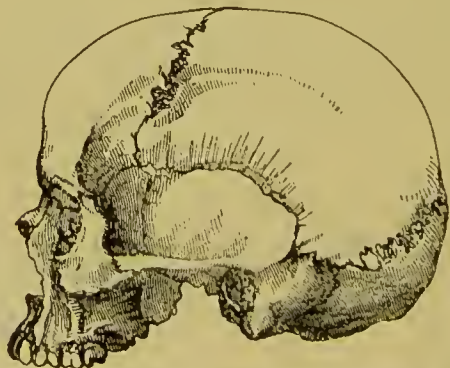


Fig. 74.—Calvarium of the Wife of "CHOPO-GOMON." A *Suttee*.—
No. 989.—Quarter-size.

58. 1003. Hindoo. ♀, æt. c. 45. Calv. D.C.

A 55, B 18·7, C 13·8, *a* 4·7, *b* 5, *c* 4·1, D 13, E 6·9, F 4·5 *p*, *a* 4, *b* 4·2, *c* 3·8, G 4·9, *a* 4·3, *b* 4·4, *c* 3·6, J 61, K 71.

"A Gentoo from Mr. BREMNER."—*Catalogue*.

59. 1019. Hindoo. ♀, æt. c. 90. Calv. D.C.

A 60, B 18·7, C 13·2, *a* 4·1, *b* 4·8, *c* 4·3, D 13·5, E 6·6, F 5·1 *t*, *a* 4·3, *b* 4·3, *c* 4, G 4·8, *a* 4, *b* 4·5, *c* 3·7, I 4·8, J 77, K 72.

Extremely atrophied by old age. The calvarium is converted into a thin capsule, the course of the sagittal and lambdoid sutures is depressed, and the bony palate and walls of the *antra* are reduced to a transparent state. The weight of this edentulous calvarium is 10·5 oz.

"A skull of a Gentoo."—*Catalogue*.

60. 1344. Hindoo. ♂, æt. c. 30. V.L. d. J.

A 65, B 19·3, C 13·6, *a* 4·7, *b* 4·9, *c* 4, D 13·7, E 6·8, F 5·1 *p*, *a* 4·4, *b* 4·8, *c* 4·2, G 5, *a* 4·4, *b* 4·3, *c* 3·8, H 4·6, I 4·9, J 75, K 73.

Died at Batavia.

61. 1345. Hindoo. *Bahar*. ♂, æt. c. 20. V.L. d. J.

A 77·5, B 20·3, C 15·3, *a* 5·5, *b* 5·2, *c* 4·6, D 14·4, E 7·2, F 5·3 *p*, *a* 4·5, *b* 4·9, *c* 4, G 5·5, *a* 4·5, *b* 4·7, *c* 4, H 5·1, I 4·9, J 73, K 76.

The teeth are remarkably fresh, the canines being much pointed; the two last molars on each side, in both maxillæ, have not been developed. The calvarium is awry, exhibiting parieto-occipital flattening on the right side. The obliquity has affected the frontal considerably, and the coronal suture is quite asymmetrical. The face is unusually long (H exceeding I), from the great depth of the lower jaw at the chin.

Died at Batavia. The skull presented by Baron VAN DER CAPELLEN.

62. 1346. Hindoo. ♂, æt. e. 35. V.L. d. J.

A 78·5, B 20·2, C 14·8, *a* 5·5, *b* 5, *c* 4·3, D 14·9, E 7·1, F 5·6 *p*, *a* 4·8, *b* 5·3, *c* 4, G 5·3, *a* 4·9, *b* 4·8, *c* 3·9, H 4·6, I 5, J 78, K 74.

Has the *processus papillaris* of HALBERTSMA on the *left* side.

Died in Java, and collected by Prof. REINWARDT.

63. 1347. Bengalee. *Brahmin*. ♂, æt. c. 30. V.L. d. J.

A 64, B 19·2, C 13·7, *a* 4·5, *b* 4·8, *c* 4·4, D 13·4, E 6·9, F 4·9 *p*, *a* 4·4, *b* 4·5, *c* 4·3, G 5·4, *a* 4·4, *b* 4·5, *c* 3·8, H 4·6, I 5·1, J 71, K 78.

The small skull of a Brahmin, who died on his arrival in Java, remarkable for its great depression in the frontal region. Sent by Baron VAN DER CAPELLEN.

64. 1348. Bengalee. ♂, æt. e. 35. V.L. d. J.
 A 81, B 20·9, C 15·7, a 5·7, b 5·5, c 4·7, D 15·7, E 7·4, F 5·5p, a 4·7,
 b 5, c 4, G 5·6, a 5, b 5, c 4·3, H 5·1, I 5·2, J 7·4, K 7·5.

This skull is generally synstotic, and the ossification of sutures is complete; yet there is no particular deformation, and no microcephalism¹. The whole of the lambdoid suture, with its *additamenta*, the sagittal, the coronal, and the sphenoidal sutures are obliterated, and the squamous much ossified. Left *foramen parietale* quite open.

Was wounded in the war with "DIEPO NEGORO"².

65. 1349. Bengalee. ♂, æt. e. 20. V.L. d. J.
 A 69, B 18·9, C 14, a 5, b 5, c 4, D 14·4, E 6·7, F 5p, a 4·3, b 4·7,
 c 3·9, G 5·5, a 4·7, b 4·7, c 3·8, H 4·7, I 4·9, J 7·4, K 8·2.

66. 1432. Hindoo. "PADAJA." ♂, æt. e. 60.
 A 65, B 19·4, C 13·7, a 4·7, b 4·8, c 4·2, D 13·9, E 6·8, F 5·1p, a 4·3,
 b 4·8, c 4, G 5, a 4·4, b 4·4, c 3·7, H 4·2, I 5, J 7·5, K 7·4.

Is oblique in the occipital region, on account of a flattening on the right side. Bears a trace of an injury on the forehead.

PADAJA was of unmixed Hindoo blood, but born in Sumatra. His pretty, diminutive skull is singularly contrasted with those of the races by whom alive he was surrounded.

Presented by Dr. BROEKMEIJER.

Dr. MORTON has made the remark that "the skulls of Hindoos are probably smaller than those of any other existing nation" (*Crania Americana*, p. 261). There is great truth in this assertion. Few skulls are smaller. Still those of Bushmen, Vedahs, and Negritos should be excepted. The great agreement of the elegant skulls of Hindoos in their types and proportions, although not in dimensions, with those of European races has afforded some support to that wide-spread and learned illusion, "the Indo-European hypothesis." Still a minute examination would reveal striking differences in their craniology among the widely separated and very diverse peoples it embraces. That alluded to by MORTON is the most obvious and most forcible. The Hindoo skulls are generally beautiful models of form in miniature.

¹ J. Barnard DAVIS, *On Synstotic Crania among Aboriginal Races of Man*, 1865, 4to, p. 27.

² DIEPO NEGORO was a prince of the reigning dynasty of Djokjakarta, one of the two native governments which still retain the administration of their own territories in Java, under Netherland supremacy. In 1825 he put himself at the head of an army and raised the standard of rebellion against the Dutch. A bloody war ensued, which lasted till 1830. The Dutch obtained recruits for this war from various sources, especially the islands of the archipelago, the Sultan of the small island of Tidore, in the Moluccas, contributing material forces. Many were killed, or died in the hospital; and some of their skulls came into the hands of Prof. VAN LIDTH DE JEUDE.

Average Measurements of Hindoo Skulls.

♂, 5 Brahmins and a high-caste man (Nos. 484, 507, 894, 944, 1454, and 1465). A 72, B 19·8, C 14·6, *a* 4·9, *b* 5·1, *c* 4·5, D 14·7, E 6·9, F 5·2, *a* 4·5, *b* 4·9, *c* 4, G 5·4, *a* 4·7, *b* 4·8, *c* 3·9, H 4·5, I 5, J·75, K·78.

Extremes, A 65–78, J·73–80, K·75–80.

One of the 5 brachycephalie.

♀, 3 high-caste women (Nos. 889, 891, 893). A 70·3, B 19·4, C 14, *a* 4·9, *b* 4·7, *c* 4·4, D 13·8, E 6·8, F 5·1, *a* 4·3, *b* 4·6, *c* 4·1, G 5·2, *a* 4·4, *b* 4·5, *c* 4, I 4·9, J·75, K·75.

All dolichocephalie.

♂, 20 low-caste men. A 71, B 19·6, C 14·4, *a* 5, *b* 5, *c* 4·3, D 14·6, E 6·9, F 5·3, *a* 4·5, *b* 4·9, *c* 3·8, G 5·4, *a* 4·6, *b* 4·7, *c* 3·9, H 4·6, I 5, J·78, K·78.

Extremes, A 59–83, J·70–80, K·72–83.

All dolichocephalie except 4.

♀, 27 low-caste women. A 67, B 19·3, C 14·2, *a* 4·9, *b* 5, *c* 4·3, D 13·6, E 6·9, F 5·2, *a* 4·1, *b* 4·6, *c* 3·9, G 5·1, *a* 4·4, *b* 4·5, *c* 3·8, H 4·3, I 4·7, J·75, K·74.

Extremes, A 54–74, J·61–78, K·66–79.

All dolichocephalie.

Averages of 55 ♂ and ♀ Hindoo skulls. A 70·1, B 19·5, C 14·3, *a* 4·9, *b* 4·9, *c* 4·3, D 14·2, E 6·9, F 5·2, *a* 4·3, *b* 4·7, *c* 3·9, G 5·2, *a* 4·5, *b* 4·6, *c* 3·9, H 4·4, I 4·9, J·75, K·76.

Dr. MORTON, in his great Table of the internal capacity of Skulls (not precisely, as he terms it, of “the Size of the Brain”), divides his Indostanie Family, of which he had 33 skulls, into “Ayras” and Bengalees. The meaning of the former designation is explained by Dr. Aitken MEIGS thus:—“The fair-skinned Ayras, a conquering race, speaking a Sanserit dialect, and occupying Ayra-Varta, which extends from the Vindya to the Himalaya Mountains, and from the Bay of Bengal to the Indian Ocean”¹, which must embrace the whole of Hindostan. He then speaks of the Mahrattas and other tribes, to whom he attributes a Persian origin. Hence it is not improbable that the people comprehended under this term *Ayras*, or *Aryas*, might include our Mussulmans. But the Brahmins are regarded as the representatives of these “fair-skinned Ayras.” As far as our cranio-logical observations extend, the Brahmin skulls do not exhibit any decided or marked diversity from those of other Hindoos. The preceding tables of measurements, in which the Brahmins

¹ *Indigenous Races of the Earth*, 1857, p. 282.

are placed apart, show very slight differences of dimension. Our measurements, *as far as they go*, do indicate a considerable diminution of capacity and in general dimensions in the case of some of the tribes which are regarded as pure aborigines, or Hill Tribes. Whether increased observations may confirm this fact remains to be seen. It is unfortunate that Prof. WELCKER's tables, which include Bhils, Gonds, and Kōls, do not afford any materials for comparison, as he has disregarded the internal capacities of skulls. Dr. MORTON informs us that the internal capacity of the two types together ranges from 67 to 91 cubic inches, giving a mean internal capacity of 81·7 c. i. Our internal capacity of 70·1 ounces of sand, when reduced to the same denomination, affords an equivalent of 84·8 cubic inches, being 3·1 only in excess of MORTON's calculation. It seems not improbable that this peculiarity in the Hindoo races has an immediate connexion with a fact which was brought out by the application of mesmerism as an anæsthetic agent in the government hospital established at Calcutta. The production of insensibility to pain by this influence in Europeans is rare and uncertain; but among Hindoos it was found to be quite an exception to the general rule if insensibility to pain was not easily produced.

References.—BLUMENBACH, *Dec. Cran.* Tab. liii. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 41. figs. 3, 4, 5, 6. PRUNERBEY, *Mém. de la Soc. d'Anthropol.* i. 403, pl. xiv. RETZIUS, *Ethnolog. Schriften*, pl. i. fig. iv.

b. *Mussulmans*¹.

1. 312. *Mussulman*. "GORMAN GHOS." ♂, æt. c. 40.
A 69, B 19·5, C 14·5, *a* 5, *b* 4·9, *c* 4·6, D 14, E 7, F 4·9 *p*, *a* 4·2,
b 4·7, *c* 4·2, G 5·4, *a* 4·5, *b* 4·6, *c* 4·1, H 4·7, I 4·5, J 7·0, K 7·7.

The long, very narrow skull of a lunatic, who died at Pinang, March 1831. Has an interparietal bone.

Presented by the late Dr. SPRY; of Bath.

2. 492. *Mussulman*. "SHAHK MUKTAR"². ♂, æt. 45. Soonie, or low-church *Mussulman*. (No. 13.)
A 80, B 20·4, C 15·2, *a* 5·5, *b* 5, *c* 4·7, D 15·4, E 7·2, F 5·5 *p*, *a* 4·8,
b 5, *c* 4·2, G 5·8, *a* 4·9, *b* 5, *c* 4·3, H 4·8, I 5, J 7·6, K 8·0.

This skull exhibits considerable parieto-occipital flattening on

¹ The *Mussulmans* are the descendants of Tartar, Persian, Afghan, and Arab conquerors and immigrants, much mixed with the native races. Those of Bengal are, generally speaking, converts from the low castes. The *Mussulmans* of India divide themselves into four sections:—*Shahks*; *Sayads*, or *Pirs*, who are Arabs; *Moghuls*, who are Persians or Tartars; and *Khansors*, who are Afghans. In certain districts of the country, one or other of these subdivisions prevails almost exclusively.

² This term *Shahk* is the same as the Arab designation *Sheik*.

the left side, and is much awry. He died of dropsy in the Native Hospital at Daeca.

3. 493. Mussulman. "SHAHK RUDJU." ♂, æt. 35. (No. 14.)
A 75, B 20, C 14·9, a 4·9, b 5·4, c 4·6, D 14·6, E 7·1, F 5·3*p*, a 4·5,
b 5, c 3·8, G 5·6, a 4·7, b 4·8, c 3·8, H 4·5, I 4·6, J 74, K 78.

Died of an ulcer in the Dacca Hospital.

4. 494. Mussulman. "MURU IHAN." ♀, æt. c. 35. (No. 29.)
A 63, B 18·9, C 14·1, a 4·8, b 4·9, c 4·4, D 12·9, E 6·7, F 5*p*, a 4·2,
b 4·6, c 3·7, G 5·3, a 4·4, b 4·5, c 3·6, H 4·1, I 4·8, J 74, K 79.

This very small cranium of an insane Mahometan woman is an excellent example of the peculiar womanly form of the skull about the occipital prominence in the upper occipital region, and great fulness in the lower, where the mastoids are very small; the occipital foramen pouts out and the condyles project about half an inch beyond the plane of the points of the mastoid processes. Has a number of triquetral bones in the squamous sutures.

5. 495. Mussulman. "BUMRUT RH * * *." ♂, æt. c. 45.
A 64, B 19·2, C 13·9, a 4·5, b 4·7, c 4·7, D 13·6, E 6·9, F 4·9*t*, a 4·3,
b 4·2, c 3·9, G 5·2, a 4·3, b 4·4, c 3·9, H 4·4, I 5, J 71, K 75.

6. 496. Mussulman. "SHAHK RAJU." ♂, æt. c. 30. A prisoner. (No. 24.)

A 61, B 18·7, C a 4·8, b 4·7, D 13, E 6·6, F 4·9*p*, a 4·1, b 4·6, c 3·8,
G a 4·2, b 4·3, c 3·5, H 4·2, I 4·8, J 74, K 63.

7. 497. Mussulman. "SHAHK JUGIE." ♂, æt. c. 45.
A 76, B 20·5, C 15, a 5·3, b 5·5, c 4·2, D 14·6, E 7·4, F 5·2*t*, a 4·7,
b 4·9, c 4·1, G 5·3, a 4·9, b 4·8, c 3·9, H 4·7, I 5·2, J 70, K 71.

The cranium of "SHAHK JUGIE," who was insane, is thick and heavy, or hyperostotic.

8. 498. Mussulman. "SHAHK SHEDUCK." Fakeer. ♂, æt. c. 35.
A 72, B 19·5, C a 4·9, b 5·2, D 14·7, E 6·8, F 5·3*p*, a 4·4, b 4·9,
c 4, G a 4·6, b 4·8, c 3·9, H 4·4, I 5, J 78.

A wry skull, from parieto-occipital flattening on the left side.

9. 499. Mussulman. "SHAHK ASMUT." ♂, æt. c. 65. (No. 19.)
A 75, B 20·6, C 15·2, a 5·6, b 5·1, c 4·5, D 14·5, E 7·5, F 5·5*p*, a 4·6,
b 5·3, c 4, G 5·4, a 4·9, b 4·8, c 4, H 4·7, I 5·2, J 73, K 72.

10. 500. Mussulman. "SHAHK RUMSAN." ♂, æt. c. 35. (No. 10.)
A 78, B 20, C 14·9, a 5·2, b 5·2, c 4·5, D 14·7, E 7, F 5·6*p*, a 4·7,
b 5·3, c 3·8, G 5, a 4·6, b 4·7, c 3·9, H 4·3, I 4·9, J 80, K 71.

Has a large interparietal bone on the left side, and a womanly

appearance generally. Triquetral bones in both spheno-parietal sutures.

11. 501. Mussulman. "NEAMUT DOOMI." ♀, æt. c. 35. (No. 15.)
A 74, B 20·1, C 14·5, *a* 4·8, *b* 4·9, *c* 4·8, D 14·1, E 7·3, F 5·2*p*, *a* 4·5,
b 4·9, *c* 4, G 5·1, *a* 4·4, *b* 4·5, *c* 4, H 4·4, I 4·8, J 7·1, K 6·9.

Died of fever in the Native Hospital at Dacca.

12. 502. Mussulman. "SHAHK PANALLAH." ♂, æt. c. 80.
(No. 9.)

A 72, B 19·5, C 14, *a* 4·8, *b* 4·9, *c* 4·3, D 14·7, E 6·8, F 5·4*p*, *a* 4·6,
b 5, *c* 4·2, G 5·4, *a* 4·6, *b* 4·7, *c* 3·9, H 4·2, I 4·7, J 7·9, K 7·9.

13. 504. Mussulman. "SHAHK BUXO." ♂, æt. 30. Calv.
(No. 17.)

A 67, B 19·3, C 14, *a* 4·9, *b* 4·9, *c* 4·2, D 13·8, E 6·9, F 5*p*, *a* 4·3,
b 4·7, *c* 4, G 5·3, *a* 4·5, *b* 4·6, *c* 3·8, I 4·8, J 7·2, K 7·6.

Has an extensive caries of the back part of the left parietal, which has quite penetrated the bone, and marks of the same disease in the central parts of the frontal. Shows parieto-occipital flattening on the left side. Died in the Native Hospital at Dacca, affected with a tumour of the head.

14. 509. Mussulman. "PEER MAHAMUD SING." ♂?, æt. c. 35.
A 62, B 19·3, C 14, *a* 4·9, *b* 5·2, *c* 3·9, D 13·3, E 6·8, F 4·9*p*, *a* 4·3,
b 4·7, *c* 3·8, G 5·1, *a* 4·5, *b* 4·5, *c* 3·6, H 4·1, I 4·6, J 7·2, K 7·4.

A groove appears to have been rubbed in the two middle upper incisors, in the manner of the natives of the Indian archipelago.

15. 514. Mussulman. "BOKA ULLAH." ♀, æt. c. 80. (No. 2.)
A 65, B 18·9, C 14·1, *a* 4·9, *b* 5, *c* 4, D 14, E 6·9, F 5·1*p*, *a* 3·9,
b 4·8, *c* 3·8, G 5·2, *a* 4·5, *b* 4·6, *c* 3·9, I 4·4, J 7·4, K 7·5.

Os frontis extremely narrow. The centre of the right parietal exhibits a flat depression, the atrophy of age.

Died in the Insane Hospital at Dacca.

16. 520. Mussulman. "OTORU." ♀, æt. c. 30. (No. 6.)
A 75, B 19·6, C 14·1, *a* 5·4, *b* 4·6, *c* 4·1, D 14·9, E 6·7, F 5·6*p*, *a* 4·5,
b 5·2, *c* 4·2, G 5·3, *a* 4·6, *b* 4·7, *c* 4·1, H 4·2, I 4·9, J 8·3, K 7·9.

Died in the Insane Hospital at Dacca.

17. 527. Mussulman. "SHANDU." ♀, æt. c. 40. (No. 4.)
A 64, B 19·2, C 14·2, *a* 4·9, *b* 4·7, *c* 4·6, D 13·5, E 6·7, F 5·1*p*, *a* 4·3,
b 4·7, *c* 4, G 5·2, *a* 4·5, *b* 4·6, *c* 4, H 4, I 5, J 7·6, K 7·7.

Has the parieto-occipital flattening on the left side. Died in the Insane Hospital at Dacca.

18. 844. Mussulman. ♂, æt. c. 60. Calv. D.C.
A 85, B 21·2, C 15·3, a 5·3, b 5·6, c 4·4, D 15·2, E 7·5, F 5·8_t, a 4·9,
b 5·3, c 4·5, G 5, a 4·6, b 4·9, c 4·3, I 5·2, J 77, K 66.

This platycephalic calvarium was labelled by DEVILLE "A Mussulman;" but this appears to be doubtful. It shows marks of annular deformation. The lower parts of the coronal and the spheno-parietal sutures are obliterated. There are also indications of plastic deformation around the occipital foramen.

19. 904. Mussulman. ♀, æt. e. 45. Calv. D.C.
A 63, B 19, C 14, a 4·8, b 4·9, c 4·3, D 13·8, E 6·8, F 5_p, a 4·2,
b 4·7, c 3·8, G 5·2, a 4·5, b 4·6, c 3·7, I 4·5, J 73, K 76.

20. 938. Mussulman. ♂, æt. e. 30. Calv. D.C.
A 70, B 19·5, C 14·3, a 4·8, b 5, c 4·5, D 14·8, E 6·7, F 5·3_p, a 4·4,
b 5, c 4·1, G 5·5, a 4·8, b 4·8, c 3·8, I 4·9, J 79, K 82.

Has large paramastoid processes on both sides, the extremities of which have articulated with the atlas. The left external pterygoid process is extended backwards and pierced with a foramen.

"A Mahomedan male from Dr. Geo. Murray PATERSON" (*Cat.*), by whom it has been mapped into phrenological regions.

21. 939. Mussulman. ♀, young. Calv. D.C.
A 65, B 19·5, C 14·5, a 4·7, b 5·3, c 4·5, D 14, E 7·1, F 5·1_p, a 4·3,
b 4·9, c 3·9, G 5·3, a 4·5, b 4·6, c 3·9, J 71, K 74.

22. 940. Mussulman. ♀, æt. e. 4. Calv. D.C.

Nos. 938 to 940 presented to DEVILLE by Dr. Geo. Murray PATERSON, an ardent phrenologist who went to Bengal.

Average Measurements of Mussulman Skulls.

♂, 14 skulls of Mussulman men. A 72, B 19·8, C 14·6, a 5,
b 5·1, c 4·4, D 14·4, E 7, F 5·2, a 4·4, b 4·9, c 4, G 5·3, a 4·6,
b 4·7, c 3·9, H 4·4, I 4·9, J 74, K 75.

Extremes, A 61–80, J 70–80, K 66–82.

All dolichocephalic, save one.

♀, 8 skulls of Mussulman women. A 66, B 19·3, C 14·1, a 4·9,
b 4·9, c 4·3, D 13·8, E 6·8, F 5·1, a 4·2, b 4·8, c 3·9, G 5·2,
a 4·4, b 4·5, c 3·8, H 4·1, I 4·7, J 75, K 76.

Extremes, A 62–75, J 71–83, K 69–79.

♂ and ♀, 22 skulls of Mussulman men and women. A 69,
B 19·5, C 14·3, a 4·9, b 5, c 4·3, D 14·1, E 6·9, F 5·1, a 4·3,
b 4·8, c 3·9, G 5·2, a 4·5, b 4·6, c 3·8, H 4·2, I 4·8, J 74, K 75.

e. *Mogul*¹.

508. *Mogul*. Shirah? caste. ♂, æt. 22. (No. 11.)

A 73, B 19·3, C 14·3, *a* 5, *b* 5·2, *c* 4·1, D 14·2, E 6·9, F 5*p*, *a* 4·3, *b* 4·7, *c* 4, G 5·3, *a* 4·6, *b* 4·7, *c* 3·8, H 4, I 4·7, J 7·2, K 7·6.

This small, feminine-looking cranium is much awry, from flattening during infancy on the right parieto-occipital region; and also exhibits annular deformation. The vaginal processes of the temporals are large. Died of disease of spleen and dysentery, in the Native Hospital at Dacca. Probably an Arab from the Red Sea.

This interesting series of crania from India (No. 484, with the intervening numbers to No. 508) was collected in Eastern Bengal by Thos. Alex. WISE, M.D., F.R.S.E., who was the chief Medical Superintendent of the Hospitals at Dacca, to which patients were brought from several large and populous districts and from the Hill-Tribes around that city.

Presented by Dr. Thos. Alex. WISE, of Rostellan Castle, Cork.

The Mussulman skulls are decidedly more bony than those of the Hindoos.

J. RACES OF NAGPORE, CENTRAL INDIA.

a. *Cole*.

807. *Cole*. "COOTLO." ♂, æt. e. 55. Singhbhoom². Calv.

A 66, B 19·3, C 14, *a* 4·7, *b* 4·8, *c* 4·5, D 13·9, E 6·8, F 5·1*p*, *a* 4·4, *b* 4·8, *c* 3·8, G 5·1, *a* 4·5, *b* 4·5, *c* 3·7, I 5·1, J 7·5, K 7·5.

The temporal portions of the coronal suture are obliterated. Has two supraorbital foramina on the left side, and an anomalous tooth (*m*. 2) on the same side, which presents the appearance of a cylindrical cusped toothlet, adhering to the outside of the molar: has a small *pneumatic process* of HYRTL on each side.

The man to whom this small calvarium belonged was a resident of Goleykera Peer, in the Singhbhoom division of Sumbhulpoor. In the Porahant rebellion of 1858 he assumed the command of a band of rebels, and was held in great terror by the people. He was reported to have killed with his own hands several followers of the Government. Force was obliged to be resorted to for his capture, from the effects of which he died, 28th February, 1859.

¹ The Moguls are the descendants of the Tartar conquerors of India under Baber, and are of purer blood than the other Mussulmans.

² Singhbhoom and Sumbhulpoor belong to Nagpore, and are in Central India, but geographically form a part of Bengal.

b. *Gond*.

808. *Gond*, or *Göd*. "SOORDUN." Sumbhulpoor. ♂, æt. e. 50. Calv.

A 65·5, B 18·8, C 14·1, a 5·1, b 4·6, c 4·4, D 14·2, E 6·8, F 4·9p, a 4, b 4·7, c 3·8, G 5·4, a 4·6, b 4·7, c 4, I 4·7, J·72, K·79.

This diminutive ealvarium belonged to a man who was charged with murder, and who died in the Chyebassa Jail, 10th April, 1860.

Coles, or Köls, and Gonds, or Göds, are said to be very savage tribes, and the only people of India who go entirely naked. In the collection of skulls formed by the Brothers SCHLAGINTWEIT is the cranium of a Köl, obtained at Péndera (Central India); and a skull of a Göd, as well as a skeleton of a Göd, both obtained at Amarkántak, in Malwa.

c. *Ghassee*.

809. *Ghassee*. "SOYTO." ♀, æt. e. 25. *Orissa*. Calv.

A 65, B 19·6, C 14·1, a 4·9, b 4·9, c 4·7, D 13·6, E 7, F 5·3p, a 4·4, b 5, c 3·9, G 5·2, a 4·3, b 4·4, c 3·7, I 4·7, J·75, K·74.

A strongly marked feminine ealvarium of a resident of Chyebassa, Singhbhoom, where she died of small-pox, April 15, 1860 (*m.* 3 on both sides not developed). The Ghassees are notorious for their defects in female virtue.

Nos. 807 to 809 presented by Fred. J. MOUAT, M.D.

K. RACES OF KHONDISTAN¹.

1. 1462. *Khōnd*, or *Kui*. Chetterpore. ♂, æt. e. 50.

A 62, B 19·2, C 14·7, a 5·2, b 5, c 4·5, D 13·7, E 6·9, F 4·9p, a 4·4, b 4·7, c 4, G 5·1, a 4·4, b 4·7, c 3·9, H 4·4, I 4·8, J·71, K·73.

The ealvarium is slightly oblique.

2. 1463. *Khōnd*. *Panoo caste*². Chetterpore. ♂, æt. c. 40.

A 60, B 18·7, C 13·5, a 4·7, b 4·3, c 4·5, D 13·5, E 6·5, F 5p, a 4·3, b 4·8, c 3·9, G 5, a 4·2, b 4·4, c 3·8, H 4·2, I 4·8, J·76, K·76.

These two men were executed for committing Meriah sacrifice.

Average measurements of 2 *Khōnd* ♂ skulls. A 61, B 18·9, C 14·1, a 4·9, b 4·6, c 4·5, D 13·6, E 6·7, F 4·9, a 4·3, b 4·7, c 3·9, G 5, a 4·3, b 4·5, c 3·8, H 4·3, I 4·8, J·73, K·74.

¹ Khondistan is a tributary state subject to the Bengal Government.

² Major-Gen. CAMPBELL describes the Panoos as transacting all business for the Khōnds, and also kidnapping the victims in the plains for the Meriah sacrifices of the Khōnds (pp. 50-52).

3. 1464. Sourah¹. ♂, æt. c. 40.

A69, B19·8, C14·7, a5·2, b4·8, c4·7, D14·7, E7, F5·1p, a4·4, b5, c4, G5·1, a4·5, b4·7, c3·8, H4·6, I4·8, J·72, K·72.

Has extensive syphilitic caries of the frontal and parietal bones. Both frontal sinuses are exposed. This man was executed for murder.

4. 1465. Ooryah. Brahmin. ♂, æt. c. 30.

A65, B19·4, C14·6, a5, b5, c4·6, D14·4, E6·8, F5p, a4·3, b4·7, c3·9, G5·4, a4·7, b4·7, c3·8, H4·6, I5, J·73, K·79.

A low-country man, not of Khōnd blood. Executed for wilful murder.

The great characteristic of these crania from Khōndistan, like that of those of all the native races of India, is smallness, conjoined with beauty of form.

The Khōnds constitute one of the aboriginal Hill Tribes of India, and have been distinguished for the extensive sacrifice of human victims, called "Meriahs," and for infanticide. These customs have been abolished by the persevering exertions of Major-Gen. John CAMPBELL and Major S. C. MACPHERSON.

References.—CAMPBELL, *Personal Narrative of Thirteen Years Service among the Wild Tribes of Khondistan*, 1864. MACPHERSON, *Memorials of Service in India*, 1865.

Nos. 1462 to 1465 presented by Major R. A. STUART, through Major-Gen. CAMPBELL.

L. RACES OF MADRAS.

a. Hindoo.

1. 1197. Hindoo. ♂, æt. 27. Lingayet caste².

A83, B20·4, C14·9, a5·3, b5·1, c4·5, D15·2, E7·1, F5·5p, a4·9, b4·7, c4·3, G5·5, a4·9, b4·9, c4, H4·6, I5·1, J·77, K·77.

An unusually large skull. The left palate bone is destroyed by caries. This man was executed for murder, at Honore, Malabar.

Presented by Capt. G. E. FRYER.

¹ The Sourahs are of a fairer complexion, their features resemble those of the Gentoos of the plains, and they are more athletic (CAMPBELL, p. 203).

² The Lingayets are the worshippers of Siva, the god of destruction and renovation, as the *Linga*, or phallus; and carry a small representation of the type about their persons—in a case round the neck, or on one arm. They are of the *Jangama* or *Vira-Saiva* sect. An account of the subject may be found in the *Glossary of Indian Terms* by H. H. WILSON, sub vocibus *Linga*, *Linga-ît*.

2. 1452. Hindoo. ♂, æt. e. 30. Calv.

A 70, B 20·2, C 14·9, *a* 5·4, *b* 5·1, *c* 4·4, D 13·9, E 7·3, F 5·1*p*, *a* 4·3, *b* 4·7, *c* 4·2, G 5·1, *a* 4·6, *b* 4·4, *c* 3·7, I 4·8, J·69, K·69.

This is an unusual example of synostosis, to which its peculiar dimensions are owing, as well as its klinocephalism and dolichocephalism. Both the squamous sutures are ossified, leaving no trace behind, as well as the parieto-mastoid sutures, those around the alisphenoids, and the outer extremities of the coronal.

3. 1454. Hindoo. ♂, æt. e. 35. *Vishnaiva Brahmin* from Oongeevaram.

A 74, B 20·1, C 15, *a* 5·3, *b* 5·2, *c* 4·5, D 15, E 7·1, F 5·3*p*, *a* 4·6, *b* 5, *c* 4·1, G 5·5, *a* 4·9, *b* 4·8, *c* 4·1, H 4·3, I 4·8, J·74, K·77.

The *tuberculum pharyngeum* upon the basilar process of the occipital is very distinct.

Nos. 1452 and 1454 presented by John SHORTT, M.D.

b. Yenadies.

1. 1450. Yenadie. ♀, æt. e. 20. Island of Strihurreecottah, Coromandel coast. Calv.

A 60, B 18·7, C 14·2, *a* 5, *b* 5·2, *c* 4, D 13·4, E 6·8, F 4·7*p*, *a* 3·9, *b* 4·4, *c* 3·6, G 5·2, *a* 4·5, *b* 4·5, *c* 3·6, I 4·5, J·69, K·76.

2. 1451. Yenadie. ♀, æt. e. 20. Strihurreecottah. Calv.

A 61, B 18·3, C 13·8, *a* 4·7, *b* 4·9, *c* 4·2, D 13, E 6·6, F 4·8*p*, *a* 4, *b* 4·7, *c* 3·7, G 5, *a* 4·3, *b* 4·4, *c* 3·5, I 4·4, J·72, K·75.

3. 1455. Yenadie. ♀, æt. e. 6. Strihurreecottah. Calv.

e. Irooler.

1453. Irooler. ♂, æt. e. 55. Nagalapooram. Calv.

A 70, B 19·8, C 14·4, *a* 5·2, *b* 5·1, *c* 4·1, D 14·3, E 7, F 5·2*p*, *a* 4·5, *b* 4·8, *c* 4·2, G 5·5, *a* 4·5, *b* 4·7, *c* 4, I 4·9, J·74, K·78.

These four calvaria (Nos. 1450 to 1453) belong to tribes which are considered to be the aborigines of Southern India, and "who are still found in all their primitive barbarity * * * leading a wild life and depending on the products of the jungles for a precarious subsistence." The specimens are small and dolichocephalic, quite of the Hindoo forms.

Reference.—*Account of some Rude Tribes, the supposed Aborigines of Southern India*, by John SHORTT, M.D., Proc. Madras Gov. Revenue Depart., No. 171; *Trans. Ethnol. Soc.* iii. 373:—"In the only Irooler I had an opportunity of dissecting, the brain weighed 2 lb. 10 oz.," *i. e.* 1188 grammes. Dr. SHORTT has not specified the sex of this Irooler, who was most likely a

man. In Dr. THURNAM's Tables the average weight of the brain in the English insane is, for men 1317 grammes, women 1188 grammes (*Journ. Mental Science*, xii. 36). This Memoir of Dr. SHORTT contains a great deal of interesting and minute information respecting the Yenadies and Iroolers. The average circumference of the head (B) among 25 Yenadie women he found to be 19·6 in., the greatest being 21·5 in., the least 18 in.

Nos. 1450 to 1453 presented by John SHORTT, M.D.

M. RACES OF NEPAL.

1. 689. Khas. *Parbattia*, or Hillman, *i. e.* Mountaineer of the Khas Tribe, which is chief of the soldier-tribes. ♂, æt. c. 70.
A 77, B 20·9, C 15·3, a 5·2, b 5·7, c 4·4, D 14·8, E 7·4, F 5·4p, a 4·7, b 4·8, c 4·2, G 5·6, a 4·9, b 5, c 4·2, H 4·7, I 5·5, J 7·3, K 7·5.

A large, heavy, dolichocephalic skull of a man, somewhat advanced in years, probably approaching 70. The sagittal, lambdoid, and coronal sutures are almost wholly obliterated from age, but without any indications of consequent deformation.

In Ceylon and the plains of India, we have found the people (Vedahs as well as the more elevated races), as far as our materials extend, characterized by small, narrow, long, and rather tall crania, having prominent nasal bones and well-expressed faces, when we refer to the typical skulls. As soon as we ascend the southern slope of the Himalayas, we meet with races of a very distinct cranial type. Few more striking contrasts to the preceding series of Hindostanic skulls could be presented than this first and strongly marked example of the Nepal races. An attentive study of the measurements, so different in their proportions to those of the Cingalese and Indian skulls, will make this apparent; but a word or two of comment may be added to render it more so.

In this skull of a Khas, although dolichocephalic, the size, weight, and capacity distinguish it from those of the Hindoos. The aspect of the face is remarkably different. It is quite orthognathous, but broad and flat in every part; the cheek-bones and zygomata are widely separated; and the nasal bones less prominent and flatter. At the same time the calvarium is larger, and in this example the frontal region both wider and more elevated. The whole cranium is an evidence of a sudden transition, which carries us at once to BLUMENBACH's *Mongolic variety*.

2. 714. Khas. ♀, æt. c. 15.
A 78, B 19·8, C 14·5, a 4·6, b 5·5, c 4·4, D 14·3, E 7, F 5·4p, a 4·5, b 4·9, c 4·3, G 5·5, a 4·8, b 4·9, c 3·8, H 3·9, I 4·8, J 7·7, K 7·8.

The whole supraoccipital region is composed of three distinct

bones, like fig. 8 of JACQUART's Plate (*De l'os épactal*); and there are four or five Wormian bones in each squamous suture.

3. 715. Khas. ♀, æt. c. 20.

A59, B18·6, C13·5, *a*4·6, *b*4·7, *c*4·2, D13·5, E6·6, F4·9*t*, *a*4·3, *b*4·3, *c*4·2, G5·1, *a*4·4, *b*4·4, *c*3·7, H4, I4·7, J·74, K·77.

4. 720. Khas. ♀, æt. c. 65.

A75, B19·7, C14, *a*4·7, *b*5, *c*4·3, D14·5, E7, F5·3*p*, *a*4·5, *b*4·9, *c*4·1, G5·4, *a*4·8, *b*4·8, *c*4, H4·6, I5·1, J·75, K·77.

Has two Wormian bones symmetrically placed in each limb of the lambdoid, and a depression, with obliteration, in the line of the posterior half of the sagittal suture.

5. 721. Khas. ♀, æt. c. 35.

A65, B18·6, C13·5, *a*4·5, *b*4·8, *c*4·2, D13·8, E6·5, F5*p*, *a*4·2, *b*4·4, *c*3·9, G5·4, *a*4·5, *b*4·7, *c*4, H4·1, I5, J·77, K·83.

6. 722. Khas. ♀, æt. c. 40.

A74, B19·7, C13·9, *a*4·5, *b*4·7, *c*4·7, D14·2, E6·9, F5·4*t*, *a*4·6, *b*5·1, *c*4·4, G5·3, *a*4·6, *b*4·6, *c*4·1, H4·5, I5·3, J·78, K·76.

Has a frontal suture, and a nodular exostosis in the left auditory canal.

7. 723. Khas. ♀, æt. c. 40.

A60, B19, C13·9, *a*4·7, *b*4·8, *c*4·4, D13, E6·7, F5·1*p*, *a*4·3, *b*4·7, *c*4·1, G5·2, *a*4·3, *b*4·2, *c*4·1, H4·5, I4·8, J·76, K·77.

Has a slight but rare irregularity in the fronto-nasal suture, which slopes upwards in a line from the right orbit to the left side of the left nasal bone, which is larger and longer than the right. Irregularities in the nasal bones are frequent in these Himalayan crania. It seems as if (when these bones become smaller and less significant) they become more liable to anomalies. Has stains of verdigris on the right mastoid and on the lower jaw.

Averages of the skulls of 6 Khas women. A68·5, B19·2, C13·9, *a*4·6, *b*4·9, *c*4·3, D13·9, E6·8, F5·2, *a*4·4, *b*4·7, *c*4·1, G5·3, *a*4·5, *b*4·6, *c*3·9, H4·2, I4·9, J·76, K·77.

Extremes, A59-75, J·74-78, K·76-83.

All the 7 Khas crania are moderately doliocephalic.

Reference.—In Major Alex. CUNNINGHAM's *Ladák (Ladák, Physical, Statistical, and Historical, 1854)* are five plates of skulls and a pelvis of the people of Kashmir and Ladak. They are rude and incorrect, but, I believe, the only figures of such objects from these remote countries.

N. RACES OF SIKIM.

a. *Lepcha Tribe*¹.

1. 687. *Lepcha*. ♂, æt. c. 40.

A78, B20, C14·2, *a*4·6, *b*5·2, *c*4·4, D14·8, E6·8, F5·7*t*, *a*4·7,
*b*5, *c*4·2, G5·5, *a*4·6, *b*4·8, *c*4·2, H4·6, I5·2, J·83, K·80.

This fine skull of a *Lepcha* is strongly brachycephalic, and at the same time so tall as to convert the calvarium into a squarish box; the entire face is broad and flat; the nasal bones, instead of being prominent and of good size, are reduced almost to the level of the superior maxillaries, have become narrow, short, and insignificant; the interorbital interval is wide as well as flat, and the entire aspect of the cranium has become changed. The frontal bone, although wide, is in this example low and recedent.

2. 690. *Lepcha*. ♀, æt. c. 35.

A79, B19·5, C14·6, *a*5·1, *b*5·2, *c*4·3, D14·6, E6·7, F5·4*p*, *a*4·5,
*b*5·2, *c*4·2, G5·4, *a*4·7, *b*4·9, *c*3·9, H4·4, I5·2, J·80, K·80.

3. 691. *Lepcha*. ♂, æt. c. 60. Calv.

A69, B19·3, C14·1, *a*4·8, *b*5, *c*4·3, D14·2, E6·7, F5·3*p*, *a*4·3,
*b*4·6, *c*4, G5·3, *a*4·5, *b*4·5, *c*3·7, I5·2, J·79, K·79.

This calvarium presents cicatrized traces of a frightful and extensive fracture passing all round the lower part of the frontal, and backwards to the posterior part of the left parietal bone².

4. 692. *Lepcha*. ♀, æt. c. 60.

A66, B19·3, C13·9, *a*4·8, *b*4·6, *c*4·5, D14·4, E6·8, F5·3*p*, *a*4·5,
*b*5·2, *c*4, G5·1, *a*4·5, *b*4·6, *c*4, H4·5, I5·1, J·78, K·75.

5. 693. *Lepcha*. ♂, æt. c. 40.

A71, B20·2, C14·8, *a*5, *b*5, *c*4·7, D14·5, E7·2, F5·2*p*, *a*4·4,
*b*5, *c*4·4, G5·5, *a*4·7, *b*4·9, *c*4·3, H4·5, I5, J·72, K·76.

Has two paramastoid processes.

6. 694. *Lepcha*. ♀, æt. c. 35.

A68, B19·5, C14·2, *a*4·9, *b*5·1, *c*4·2, D14·2, E6·8, F5·2*p*, *a*4·6,
*b*4·5, *c*4·1, G5·2, *a*4·6, *b*4·7, *c*4, H4·3, I5, J·76, K·76.

Has a prominent nose and very small paramastoid processes.

¹ The *Lepcha* is the aboriginal inhabitant of Sikim (Dr. J. D. HOOKER, *Himalayan Journals*, 1854, i. 127).

² A similar case of fracture of the skull, of greater extent, in a New Caledonian, also cicatrized, is described by M. BERCHON, *Étude sur les fractures du crâne*, 1863, avec planche.

7. 695. Lepcha. ♂, æt. c. 55.

A80, B20·7, C14·5, *a*5, *b*5, *c*4·5, D15, E6·9, F5·8, *a*5·1, *b*5, *c*4·2, G5·6, H4·6, I5·5, J·84, K·81.

8. 696. Lepcha. ♀, æt. c. 25.

A61, B19·1, C14, *a*5, *b*4·8, *c*4·2, D13·4, E6·8, F4·9*p*, *a*4·3, *b*4·5, *c*3·8, G5·1, *a*4·3, *b*4·4, *c*3·9, H4·2, I4·8, J·72, K·75.

9. 697. Lepcha. ♂, æt. c. 30.

A63, B20·9, C16, *a*5·5, *b*5·4, *c*5·1, D14·8, E7·8, F5·3*p*, *a*4·6, *b*5·1, *c*4·4, G5·4, *a*5, *b*5·1, *c*4·2, H4·8, I4·9, J·68, K·69.

This is a curious example of *hyperostosis*. The deposition of ivory-like osseous matter has pervaded every part—the nasal and turbinated bones, the lower maxilla, and the other bones of the face, as well as the whole calvarium. The weight of the entire cranium is 59 oz. av. The sutures are in a patent state. There is a cicatrized injury on the left side of the frontal¹.

No. 697 will be described by the author and figured in the Trans. of the Accademia di Medicina di Torino.

10. 698. Lepcha. ♀, æt. c. 35.

A65, B19·4, C14, *a*4·5, *b*4·8, *c*4·7, D13·6, E6·7, F5·3*t*, *a*4·5, *b*4·7, *c*3·9, G5·4, *a*4·4, *b*4·5, *c*3·8, H4·5, I5·1, J·79, K·80.

Has a large interparietal bone and a frontal suture.

11. 699. Lepcha. ♀, æt. c. 30.

A67, B20, C14·6, *a*5, *b*4·8, *c*4·8, D14·2, E7·2, F5·2*p*, *a*4·3, *b*4·8, *c*4·3, G5·5, *a*4·5, *b*4·7, *c*4·2, H4·5, I5, J·72, K·76.

12. 700. Lepcha. ♂, æt. c. 35.

A79, B20·5, C15, *a*5, *b*5·5, *c*4·5, D15·2, E7, F5·2*p*, *a*4·9, *b*5·3, *c*4·2, G5·6, *a*4·7, *b*4·8, *c*3·9, H4·6, I5·3, J·74, K·80.

This skull is very much awry, both in the frontal and occipital regions, from parieto-occipital flattening on the right side.

13. 704. Lepcha. ♂, æt. c. 30.

A68, B19·3, C13·8, *a*4·6, *b*5, *c*4·2, D14·2, E6·8, F5·1*p*, *a*4·3, *b*4·6, *c*4·1, G5·3, *a*4·6, *b*4·7, *c*4, H4·3, I5, J·75, K·78.

14. 732. Lepcha. ♀, æt. c. 7.

A71. A large and beautiful skull of a little girl.

¹ JADELOT, *Recherches sur une Tête Humaine d'une grosseur extraordinaire*, Paris, 1799. G. CUVIER, *Nouv. Observ. sur une altération singulière de quelq. Têtes Hum.*, Paris, 1823. WENZEL GRUBER, *Monogr. eines merkwürdigen osteosclerotischen Kopfes*, Prag, 1847. G. VROLIK, *De Hyperostosi Cranii*, Amstel., 1848. HUSCHKE, *Ueber Craniosclerosis Totalis Rhaehitica*, Jena, 1858. GADDI, *Iperostosi Serofulosa cefalo-vertebrale e cefalo-sclerosi rachitica*, Modena, 1863. J. C. DE MAN, *Beschrijving van een Cranium Osteoscleroticum*, Middelburg, 1866. C. MURCHISON, *On a Peculiar Disease of the Cranium*, &c., 1866.

15. 733. Lepcha. ♂, æt. e. 50.
 A 72, B 20, C 14·5, *a* 4·8, *b* 5·1, *c* 4·6, D 14·5, E 7, F 5·4_p, *a* 4·4,
b 4·9, *c* 4·4, G 5·6, *a* 4·6, *b* 4·8, *c* 4·1, H 4·5, I 5·3, J 77, K 80.
16. 740. Lepcha. Imperfect skull of a child about 4 years of age.

Average Measurements of 13 Lepcha Skulls.

♂, 7 crania of Lepcha men. A 73·8, B 20, C 14·4, *a* 4·8, *b* 5·1,
c 4·4, D 14·6, E 6·9, F 5·3, *a* 4·6, *b* 4·9, *c* 4·2, G 5·4, *a* 4·6,
b 4·6, *c* 4, H 4·5, I 5·2, J 77, K 78.

Extremes, A 68–80, J 72–84, K 76–81.

Two of the 7 are brachycephalic.

♀, 6 crania of Lepcha women. A 67·6, B 19·4, C 14·2, *a* 4·9,
b 4·9, *c* 4·4, D 14, E 6·8, F 5·2, *a* 4·4, *b* 4·8, *c* 4, G 5·2, *a* 4·5,
b 4·6, *c* 3·9, H 4·4, I 5, J 76, K 77.

Extremes, A 61–79, J 70–80, K 75–80.

All but No. 690 dolichcephalic.

General averages of the 13 Lepcha skulls, ♂ and ♀. A 70·6,
 B 19·7, C 14·3, *a* 4·8, *b* 5, *c* 4·4, D 14·3, E 6·8, F 5·2, *a* 4·5,
b 4·8, *c* 4·1, G 5·3, *a* 4·5, *b* 4·6, *c* 3·9, H 4·4, I 5·1, J 76, K 77.

In the description of the crania of the Nepal and neighbouring Tribes, a very special advantage will be derived from the "Report" of Prof. OWEN. This distinguished comparative anatomist prepared an elaborate anatomical and zoological account of a series of these skulls, with which we may compare the specimens here enumerated¹.

The mean zygomatic diameter of the 13 adult crania here catalogued (Nos. 697 and 732 are omitted) is 5·1 in., which does not exceed that of English skulls, the diameters ranging from 4·8 in. to 5·5 in. Still there is an appearance of prominence and wideness of the cheek-bones in most of them, dependent on the size and flatness of the face, which is not seen in English skulls. This, like every other peculiar feature, is not equally expressed, but it is distinguishable in all, or almost all, and seems chiefly to depend upon the robustness of both maxillæ and of the malar bones. The mean length of these 13 skulls is 6·8 in., and they range between 6·7 in. and 7·2 in. Their mean breadth is 5·2 in., and they vary from 4·9 in. to 5·7 in. Three are brachycephalic, the rest dolichcephalic. They are scarcely to be considered prognathous, certainly not more than one or two of those of the women. The nasal bones are for the most

¹ *Rep. Brit. Assoc. 1859, Rep. on a Series of Skulls of various Tribes of Mankind inhabiting Nepal*, by Prof. OWEN, F.R.S. A separate copy of this Report I owe to the politeness of its author.

part very flat, narrow, and short. In some instances they are elevated on prominent nasal processes of the superior maxillaries, so as to form an acute bridge to the nose. The prominence in the position of the frontal sinuses varies a good deal, from absolute flatness to a decided supranasal boss. In one there is a frontal suture. The spheno-parietal suture is present in all, but varies greatly in length. The forehead is moderately elevated, and differs a good deal in width. The average width of the frontal is 4.5 in., ranging between 4.3 in. and 5.1 in. in the large brachycephalic skull No. 695. In one skull (No. 690) *m.* 3 is anormally wanting in both jaws; in No. 687 on the left side in the upper jaw.

These Lepcha crania appear to me to be quite distinct in form from the skulls of Europeans, and equally so from those of the Hindoos described in this Catalogue, or of the inhabitants of the plains of Eastern India. Taking the European skull as the standard by which to measure superiority (*"ea faciei forma quam nos Europaei pulchriorem arbitramur"*), they appertain to a race of inferior capabilities; but they are not low in the scale formed by the very diverse series of human races, extending from the northern European to the Bushman, Tasmanian, Australian, Vedah, Negrito, &c.; yet they are below the former. The mean internal capacity of these 14 crania is 70.4 ozs. = 85.2 cubic inches. The term "Indo-European," when applied to human crania, requires to be explained. I feel unable to attach any definite meaning to it, unless it be taken for the "oval skull" of PRICHARD. It is employed by Prof. OWEN as synonymous with BLUMENBACH'S designation "Caucasian," the indefiniteness of which has been felt. This term is derived from a learned philological hypothesis, in great vogue, which was formed with an entire disregard to physical science, has no ethnological basis to stand upon, and is most probably quite devoid of foundation in truth, and, when reflected thence to human races, confounds black and white and every other distinction. The Hindoo crania in this Catalogue lend no countenance to the notion of any alliance between them and those of Europeans; and they equally refuse to be amalgamated with those of the Lepchas and other Himalayan tribes. They are all three quite distinct, however difficult it may be to define the differences among them. Not one of these skulls of Lepchas approaches the Æthiopian, Australian, or Greek type, unless it be in a feature or two. Nos. 694 and 699, crania of women, approach the European form a good deal—the latter being distinguished from it and from the rest by prognathousness and a full set of very large teeth, as large as those of an Australian woman. Hence in this particular of dentition it might be said to approach the Australian; but in the nasal bones and in the form and structure, thickness, &c. of the calvarium it is quite different from that type of skull.

b. *Bodpas*.

1. 705. *Bodpa*. ♀, æt. e. 60.

A72·5, B20, C14·9, *a*5, *b*5·5, *c*4·4, D14, E7·3, F5·2*p*, *a*4·4, *b*4·9, *c*3·9, G5·3, *a*4·6, *b*4·6, *c*4, H4·6, I4·9, J·71, K·72.

2. 706. *Bodpa*. ♀, æt. e. 17. Imperf. ealv..

B20·6, C15·5, *a*5·4, *b*5·2, *c*4·9, E7·4, F5·2*p*, *a*4·7, *b*5, *c*4·1, G5·5, J·70, K·74.

3. 707. *Bodpa*. ♂, æt. e. 40.

A75, B19·9, C14·2, *a*4·9, *b*5·2, *c*4·1, D14·6, E6·6, F5·7*p*, *a*4·8, *b*4·8, *c*4·1, G5·3, *a*4·8, *b*4·8, *c*3·7, H4·8, I5·5, J·86, K·80.

This is a fine brachycephalie skull.

4. 708. *Bodpa*. ♀, æt. e. 50.

A60, B19·2, C13·9, *a*4·7, *b*5·1, *c*4·1, D13·5, E6·8, F5*p*, *a*4·2, *b*4·6, *c*3·9, G4·8, *a*4·4, *b*4·4, *c*3·5, H3·9, I4·5, J·73, K·70.

5. 709. *Bodpa*. ♂, æt. c. 60.

A68, B19·8, C14·4, *a*5, *b*5, *c*4·4, D13·8, E7, F5*p*, *a*4·4, *b*4·8, *c*4, G5·3, *a*4·7, *b*4·7, *c*3·9, H4·4, I5, J·71, K·75.

The upper alveoli are greatly absorbed on the left side.

6. 711. *Bodpa*. ♀, æt. e. 17.

A84·5, B20·5, C14·7, *a*5·2, *b*5, *c*4·5, D15, E7·2, F5·4*t*, *a*4·5, *b*4·7, *c*4·2, G5·5, *a*4·7, *b*4·9, *c*4·2, H4·8, I5, J·75, K·76.

Another large dolichocephalic and beautiful skull of a young woman—finer than No. 706.

7. 712. *Bodpa*. ♀, æt. e. 17.

A70, B19·6, C13·7, *a*4·4, *b*5, *c*4·3, D14·3, E6·6, F5·5*p*, *a*4·7, *b*5, *c*4·3, G5·1, *a*4·4, *b*4·5, *c*3·9, H3·9, I5, J·83, K·77.

This small, brachycephalie skull of a young woman is quite a contrast in most respects to No. 711, and exhibits parieto-occipital flattening on the left side. Still they both present indications of the *Bodpa* race.

8. 713. *Bodpa*. ♀, æt. c. 60.

A66, B19·5, C14, *a*4·7, *b*5, *c*4·3, D13·7, E6·8, F5·2*p*, *a*4·4, *b*4·9, *c*4·2, G5·2, *a*4·5, *b*4·6, *c*3·9, H4, I4·9, J·76, K·76.

Another small skull of a woman, whose teeth are black with betel, an appearance not universal among these crania of Himalayan tribes. Her teeth are greatly worn down in the molinary form; besides which she has adopted some singular practice that has rubbed off the outsides deeply. The upper canine, two premolars, and first molar, on the right side, have been filed down into their pulp-cavities. The lower teeth, on both sides,

have suffered in the same way. This appearance is somewhat similar to that produced by the custom of filing away the teeth, which prevails in the Indian archipelago.

9. 716. Bodpa. ♀, æt. c. 25.

A67·5, B19·3, C14·1, *a*4·8, *b*5, *c*4·3, D13·8, E7, F5·1*p*, *a*4·2, *b*4·8, *c*4, G4·9, *a*4·5, *b*4·5, *c*4·1, H4·1, I4·8, J·72, K·70.

10. 718. Bodpa. ♀, æt. c. 40.

A64, B19, C13·7, *a*4·3, *b*4·7, *c*3·7, D13·7, E6·7, F5·4*t*, *a*4·4, *b*4·4, *c*4·2, G5·1, *a*4·4, *b*4·5, *c*4, H4·4, I4·5, J·80, K·76.

11. 730. Bodpa. ♂, æt. c. 18. Calv.

A86, B20·8, C14·8, *a*5, *b*5·1, *c*4·7, D14·8, E7·3, F5·8*t*, *a*4·8, *b*4·6, *c*4·6, G5·4, *a*4·8, *b*5, *c*4·1, I5·5, J·79, K·74.

Awry, from parieto-occipital flattening on the right side.

12. 736. Bodpa. ♀, æt. c. 17.

A71, B19·6, C14·1, *a*5, *b*4·9, *c*4·2, D13·9, E6·9, F5·3*p*, *a*4·4, *b*5, *c*4·3, G5·2, *a*4·6, *b*4·6, *c*3·9, H3·9, I4·8, J·76, K·75.

13. 737. Bodpa. ♀, æt. c. 25.

A77, B20·3, C14·5, *a*4·9, *b*5·1, *c*4·5, D14·7, E6·9, F5·6*p*, *a*4·6, *b*5·1, *c*4·8, G5·5, *a*4·6, *b*4·7, *c*3·9, H4·4, I5·2, J·81, K·79.

14. 738. Bodpa. ♂, æt. c. 35. Calv.

A77, B20·3, C15·1, *a*5, *b*5·5, *c*4·6, D14·9, E7·3, F5·3*t*, *a*4·4, *b*4·6, *c*4, G5·8, *a*4·9, *b*5, *c*4·1, I5·6, J·72, K·79.

Has a frontal suture.

Average Measurements of Bodpa Skulls.

♂, 4 crania of Bodpa men. A76·5, B20·2, C14·5, *a*4·9, *b*5·1, *c*4·4, D14·5, E6·9, F5·5, *a*4·6, *b*4·8, *c*4·4, G5·3, *a*4·7, *b*4·8, *c*3·9, H4·5, I5·3, J·79, K·77.

Extremes, A68–86, J·71–86, K·74–80.

Two of the 4 brachycephalic.

♀, 10 skulls of Bodpa women. A70·6, B19·6, C14·3, *a*4·9, *b*5, *c*4·3, D14, E7, F5·2, *a*4·4, *b*4·8, *c*4·1, G5·2, *a*4·6, *b*4·6, *c*4, H4·2, I4·9, J·75, K·74.

Extremes, A60–84, J·71–83, K·70–79.

Two of the 10 brachycephalic.

14 skulls of Bodpa men and women. A73·5, B19·9, C14·4, *a*4·9, *b*5, *c*4·3, D14·2, E6·9, F5·3, *a*4·5, *b*4·8, *c*4·2, G5·2, *a*4·6, *b*4·7, *c*3·9, H4·3, I5·1, J·76, K·75.

Fourteen skulls of Bodpas have been catalogued here, four of which have belonged to young women of about 17 years of age; and most of their anatomical peculiarities have been mentioned

as they occurred in the different specimens. Four are brachycephalic, the rest dolichocephalic. Some have received undesigned modifications of form by the influences to which they have been exposed in infancy. I think Prof. OWEN does not allude to any deviation from the normal form, produced by any cause, in the series of 90 skulls he describes, except in one, that of a Magar (p. 97); where he has noticed the occipital half of the cranium to be unsymmetrical¹. But among the skulls here described, Nos. 700, 701, 707, 712, 727, and 730 are more or less deformed by art, independently of No. 710 (a Lhopa), which is distorted in an exaggerated degree².

It may with great propriety be said of these crania of Bodpas, like most of the Himalayan series, that their general aspect brings them under BLUMENBACH'S Mongolian type. Some more markedly coincide with his definition, some less so. Still they must all be included in the "Mongolian variety" of the Göttingen Professor. The malar bones are large and flat in these 14 Bodpa skulls; even in those of some of the women this remarkable flatness of face is seen, as in the very fine example of a Bodpa beauty, No. 711. In No. 738 the frontal suture is persistent. The interorbital space is usually wide. I do not consider these crania to deserve the epithet prognathous. Their chins are prominent. It is only in some of the skulls of women that prognathousness appears; and such also is the case in the crania of some English women. The nasal bones vary a good deal, but never acquire a European magnitude. The internasal suture is often irregular and oblique, and in No. 705 is obliterated. The sphenoparietal suture differs much in length, but is always present.

Of the teeth, *m.* 3 offers some anomalies. In No. 710 (the Lhopa) it is wanting on both sides, in No. 713 in both jaws, in No. 716 on the left side in the upper jaw; and in No. 738 it is diminutive, with one fang on both sides.

Reference.—AL. CUNNINGHAM, *Ladák, with Notices of surrounding Countries*, 1854, pl. xxi. (Skulls of Botis of Ladák).

¹ Notwithstanding, others of the Museum crania present indications of deformation, mostly of that kind which is produced in nursing. The "Kiranti" (1 d d d d d d) and some others are examples of the *tête annulaire*; yet the evidences of this distortion are slight. The "Lepcha" (1 d d d d) is very oblique from parieto-occipital flattening on the left side. That labelled "Dirgè, Bhotia, of Kami" (1 r r r r), and the "Magar" (1 n n n n) are both deformed in the same manner. The "Lowlander" (1 j j j j j) is deformed in this way, but on the right side.

² In reference to nursing on a cradle-board and to filing the teeth, of which No. 713 seems to be an instance, Mr. HODGSON has written to me, "I cannot speak positively as to the practices you allude to as having altered the natural character of the teeth or skull. In general the Himalayan tribes do not resort to any of those queer devices by which rude tribes elsewhere are wont to disfigure themselves." It is probable that the flattening of the occiput is the result of laying the head in infancy upon a hard plane surface.

O. RACES OF BHÚTÁN.

1. 710. Lhopa, or Dharma Bhotia. ♂, æt. c. 40. Calv.

A 77, B 19·2, C 14·2, *a* 5·1, *b* 4·8, *c* 4·3, D 14·8, E 6·2, F 5·5*p*, *a* 4·9, *b* 5, *c* 4·3, G 5·4, *a* 4·9, *b* 4·9, *c* 3·6, I 5·2, J 88, K 87.

This singular calvarium of a Dharma Bhotia, or inhabitant of the country of the Dharma Raja, a spiritual chief¹, is a striking example of artificial distortion, and might have belonged to an aboriginal American. It closely resembles the calvaria of Peruvians delineated in the *Crania Americana*. The posterior third of the parietals, and the whole supraoccipital region, are reduced to a flat surface, which is a little awry to the right side, the frontal being slightly flattened on the left. This extensive deformation has been effected without counterpressure on the frontal region. Two incisors on the right side, one normal, the other small and supernumerary, are placed behind the others.

2. 719. Lhopa. ♀, æt. c. 40.

A 74, B 20·5, C 15, *a* 5·2, *b* 4·8, *c* 5, D 13·9, E 7·4, F 5·2*p*, *a* 4·7, *b* 4·8, *c* 4, G 5·2, *a* 4·7, *b* 4·7, *c* 4·1, H 4·2, I 5, J 70, K 70.

Has distinct traces of a lozenge-shaped interparietal bone.

P. RACES OF THE TERAI.

1. 688. Bodo, or Méch². ♂, æt. c. 35.

A 81, B 20·5, C 15·2, *a* 5·2, *b* 5·6, *c* 4·4, D 15, E 7, F 5·8*p*, *a* 4·9, *b* 5, *c* 4·5, G 5·8, *a* 4·8, *b* 5·1, *c* 4·1, H 4·6, I 5·3, J 82, K 82.

A very fine skull, with a frontal suture.

2. 701. Bodo. ♀, æt. c. 17.

A 74, B 18·5, C 13·2, *a* 4·5, *b* 4·9, *c* 3·8, D 13·9, E 6·4, F 5*p*, *a* 4·3, *b* 4·5, *c* 4·2, G 5·2, *a* 4·5, *b* 4·5, *c* 3·6, H 4·2, I 5·1, J 79, K 81.

A wry skull, from parieto-occipital flattening on the right side.

3. 702. Bodo. ♀, æt. c. 17.

A 87, B 20·3, C 14·8, *a* 5·2, *b* 4·9, *c* 4·7, D 14·5, E 7, F 5·6*p*, *a* 5, *b* 4·9, *c* 4·2, G 5·4, *a* 4·8, *b* 4·8, *c* 4·1, H 4·7, I 5, J 80, K 77.

A fine, thin, capacious skull of a young woman, distinguished by an interparietal bone on the left side of the apex of the occipital, a frontal suture, and a Wormian bone symmetrically

¹ HOOKER'S *Himalayan Journals*, i. 136.

² Méchi, people of the pestilential Terai, the forests about the foot of the Himalayas (HOOKER, i. 139).

placed in the middle of the suture between each parietal and the frontal bone. Possibly hydrocephalic.

4. 703. Bodo. ♂, æt. c. 50.

A 77, B 20·3, C 15·4, *a* 5·2, *b* 5·3, *c* 4·9, D 14·8, E 7·2, F 5·4*t*, *a* 4·7, *b* 4·5, *c* 4·4, G 5·7, *a* 5, *b* 4·9, *c* 4, H 4·9, I 5·1, J 7·5, K 7·9.

A very fine skull, which has a ridge descending from the middle of the sagittal suture down the frontal.

5. 717. Bodo. Some bones of the cranium of a child, aged about 3 years.

6. 724. Bodo. ♀, æt. c. 35.

A 78, B 20·6, C 15·2, *a* 5·2, *b* 5·3, *c* 4·7, D 14, E 7·6, F 5·1*p*, *a* 4·5, *b* 4·6, *c* 4·3, G 5·8, *a* 4·7, *b* 5, *c* 4·2, H 4·4, I 5·1, J 6·7, K 7·6.

A remarkably long and narrow skull, in which the feminine projection of the upper occipital is very prominent. Has also a long, prominent, and narrow nose.

7. 725. Bodo. Girl aged about 11.

A 66, B 18·9, C 13·7, *a* 4·7, *b* 4·8, *c* 4·2, D 13·6, E 6·5, F 5·3*p*, G 5·2, *a* 4·4, *b* 4·6, *c* 3·9, H 4, I 4·4, J 8·1, K 8·0.

8. 726. Bodo. ♂, æt. c. 35.

A 76, B 20, C 14·6, *a* 4·9, *b* 5·1, *c* 4·6, D 14·3, E 7·1, F 5·4*t*, *a* 4·5, *b* 4·5, *c* 4·4, G 5·5, *a* 4·6, *b* 4·7, *c* 4·2, H 4·6, I 5·6, J 7·6, K 7·7.

9. 727. Bodo. ♀, æt. c. 20.

A 68, B 19·2, C 13·9, *a* 5, *b* 5, *c* 3·9, D 14·3, E 6·8, F 5·1*p*, *a* 4·4, *b* 4·9, *c* 4·2, G 5·5, *a* 4·6, *b* 4·7, *c* 3·7, H 4·7, I 5, J 7·5, K 8·0.

The alisphenoids only just touch the parietals. Both lower canines are furnished with two fangs each. Slightly deformed by parieto-occipital flattening towards the right side.

10. 728. Bodo. ♀, æt. c. 18. Calv.

A 76, B 20·2, C 14·8, *a* 5, *b* 5, *c* 4·8, D 14·5, E 7·2, F 5·2*p*, *a* 4·6, *b* 5, *c* 4·1, G 5·5, *a* 4·9, *b* 4·9, *c* 4·2, I 5·1, J 7·2, K 7·6.

Cicatrized mark of injury on the left side of the frontal.

11. 729. Bodo. ♀, æt. c. 25.

A 71·5, B 19·7, C 14·2, *a* 4·9, *b* 5·1, *c* 4·9, D 14·3, E 6·7, F 5·5*p*, *a* 4·4, *b* 5·2, *c* 4·3, G 5·3, *a* 4·3, *b* 4·5, *c* 3·9, H 4·4, I 5, J 8·2, K 7·9.

12. 731. Bodo. ♀, æt. c. 18.

A 74, B 19·7, C 14·5, *a* 5, *b* 5, *c* 4·5, D 14·2, E 7, F 5·2*p*, *a* 4·4, *b* 4·8, *c* 4·3, G 5·6, *a* 4·8, *b* 4·9, *c* 4, H 4·4, I 5·2, J 7·4, K 8·0.

13. 734. Bodo. ♀?, æt. c. 25.

A 69·5, B 19·5, C 14·2, *a* 4·9, *b* 5·1, *c* 4·2, D 14·5, E 6·5, F 5·6*p*, *a* 4·5, *b* 4·9, *c* 4·2, G 5·4, *a* 4·4, *b* 4·7, *c* 3·9, H 4·5, I 5·7, J 8·6, K 8·3.

14. 735. Bodo. ♂, æt. e. 25.

A 68, B 19·6, C 14·2, *a* 4·8, *b* 4·8, *c* 4·6, D 15, E 6·8, F 5·5_p, *a* 4·8, *b* 5, *c* 3·8, G 5·3, *a* 4·8, *b* 4·8, *c* 3·8, H 4·5, I 5, J 80, K 77.

Has a lozenge-shaped interparietal bone, Wormian bones, and a frontal suture.

Average Measurements of Bódo Skulls.

♂, 4 Bódo men. A 75·5, B 20·1, C 14·8, *a* 5, *b* 5·2, *c* 4·6, D 14·8, E 7, F 5·5, *a* 4·7, *b* 4·7, *c* 4·3, G 5·5, *a* 4·8, *b* 4·9, *c* 4, H 4·6, I 5·2, J 78, K 79.

Extremes, A 68–81, J 75–82, K 77–82.

Two brachycephalie.

♀, 7 Bódo women. A 75·5, B 19·6, C 14·3, *a* 4·9, *b* 5, *c* 4·4, D 14·2, E 6·9, F 5·2, *a* 4·4, *b* 4·8, *c* 4·2, G 5·4, *a* 4·6, *b* 4·7, *c* 3·9, H 4·4, I 5·2, J 76, K 79.

Extremes, A 68–78, J 67–86, K 76–83.

Two brachycephalie.

12 Bódo men and women. A 75·5, B 19·8, C 14·5, *a* 4·9, *b* 5·1, *c* 4·5, D 14·5, E 6·9, F 5·3, *a* 4·5, *b* 4·7, *c* 4·2, G 5·4, *a* 4·7, *b* 4·8, *c* 3·9, H 4·5, I 5·2, J 76, K 78.

This fine collection of the skulls of the Sub-Himalayan Tribes I owe to the generosity and zeal of the learned orientalist, Mr. Brian H. Hodgson, F.Z.S., Member of the Asiatic Societies of London and Bengal, Chevalier of the Legion of Honour, Corr. Memb. of the Institute of France, by whose laborious researches the languages of these people have received such great illustration.

Reference.—B. H. HODGSON, *On the Kocch, Bodo, and Dhimal Tribes*, Calcutta, 1847.

In the concluding "Observations" upon the Nepal skulls by Prof. OWEN, he remarks:—"There are not more than two or three skulls in the entire series [of 90] which would have suggested, had they been presented to observation without previous knowledge of their country, that they belonged to any primary division of Human kind distinct from that usually characterized by craniologists as Caucasian or Indo-European: the majority might have been obtained from graveyards in London, Edinburgh, or Dublin, and have indicated a low condition of the Caucasian race" (p. 102).

The series of Sub-Himalayan skulls included in this "Catalogue" appears to me not to give support, either to the view that the generality of them would not be distinguishable from those of Europeans, or to the opinion that the majority might have been obtained from any portion of the British Islands. With the small knowledge, or more properly want of knowledge,

previously possessed of the peculiar forms of the crania of the Sub-Himalayan tribes, it might have been impossible to decide that these skulls had belonged to them. Still it would not have been at all difficult to pronounce that they appertained to some race which possessed the form of cranium embraced under BLUMENBACH'S "Mongolian variety." They are not all equally impressed with Mongolic features; but the majority possess them unequivocally. Hence they are quite distinct from the "Caucasian" skulls of BLUMENBACH'S first variety; and their peculiar conformation, or the combination of features they manifest, could not be met with in skulls from British cemeteries. The limitation of the Mongolian forms, and the variations they manifest in the different races in which they prevail, are not at present understood. It is probable that the crania yet to be enumerated in this "Catalogue" may serve materially to increase information upon these points.

The differences upon which these distinctions rest are anatomical, yet deserve more to be regarded as diversities of proportion than as true organic differences. Still, they are not the less important or the less deserving of accurate discrimination. The differences between man and the anthropoid apes may also be viewed as mainly differences of proportion¹. Hence, until the notions of those who have schooled themselves to regard such diversities to be owing to secondary causes merely, and to be unessential, are established, the differences of proportion which distinguish the skulls of the various races of men are fit subjects for minute study and deserving of high estimation; for, it may be safely said, with them are intimately connected every gradation of structure and function between the lowest savage and the highest European.

Prof. OWEN maintains with great force and justice, yet, it seems, scarcely in conformity with his own principles, that the modifications of form and size which distinguish man from the anthropoid apes, are "structures peculiar to and characteristic of human kind." He does not consider his position to be invalidated when it is shown that the anthropoid apes have similar structures, but of different proportions. With the same propriety it may be said that the conformation and features of the Sub-Himalayan skulls are peculiar to and characteristic of the aboriginal races found there. The argument is the same in both cases, and, if valid in the one, must be so in the other.

¹ "Not being able to appreciate or conceive of the distinction between the psychical phenomena of a Chimpanzee and of a Bushman, or of an Aztec, with arrested brain-growth, as being of a nature so essential as to preclude a comparison between them, or as being other than a difference of degree, I cannot shut my eyes to the significance of that all-pervading similitude of structure—every tooth, every bone strictly homologous—which makes the determination of the difference between *Homo* and *Pithecus* the anatomist's difficulty."—OWEN, *Journ. Proc. Linn. Soc.* 1857, vol. ii.

Prof. OWEN dwells much upon the *varieties* which occur in his series of Sub-Himalayan skulls. Such varieties are to be met with in an extensive series of skulls of any people. But these are always confined in their circle, they do not extend to every feature; hence they very rarely, if ever, carry the cranium over from one division to another, and they scarcely affect the well-marked examples. He pronounces it difficult to detect with certainty, in any single specimen of a skull, the distinctive characters of a race, save in an Australian or Tasmanian. I feel convinced that this profound comparative anatomist, the author of the elaborate Catalogue of the Osteological series of the Order Bimana in the Mus. of the Roy. Coll. of Surgeons, would at once recognize the cranium of an Esquimaux or a Bushman. It would be easy to add many other races whose skulls are unmistakeable, as that of the Greek, the Lapp, the Jew, the Kafir, the New Caledonian, the Kanaka. I am satisfied that further researches will enable the investigator to discriminate a number of races hitherto confounded. It is not at all surprising that Prof. OWEN experiences increasing difficulties in determining from crania "the primary race or variety of mankind."

Prof. OWEN endows external influences with power to modify and render uniform the races which are equally exposed to them; yet the existence of aboriginal Kafirs and Bushmen in the same regions of Africa¹, to leave innumerable other striking instances on one side, is very far from supporting this view. And when he contemplates the civilization of the Australians, *i. e.* the conversion of them into a race like ourselves and the deletion of the extraordinary powers in which they so completely excel us (for this is the meaning of the term civilization, thus used—the endowment of the Australians with the same impulses, notions, and habits as ourselves), he gives countenance to the hypothesis of development, which, I believe, experience and knowledge wholly contradict.

¹ LIVINGSTONE, describing his passage across the Kalahari Desert, tells us that its human inhabitants consist of the Bushmen and the Bakalahari, a tribe of fine Kafirs. The latter, he says, are traditionally reported to be the oldest of the Bechuana tribes; and he then makes this reflection:—"Living ever since on the same plains with the Bushmen, subjected to the same influences of climate, enduring the same thirst, and subsisting on similar food for centuries, they seem to supply a standing proof that locality is not always sufficient of itself to account for difference in races" (*Researches in South Africa*, p. 49). The enthusiastic LIVINGSTONE is not a man of science. His philosophy on such subjects is pretty much that of the ancient Hebrews; but the *fact* he narrates is in perfect agreement with the rest of our knowledge of human races.

Q. RACES OF ASSAM.

a. *Munipur Tribe.*

483. Munipooree, or Moité. "AMU." ♀, æt. c. 45.

A74, B 20·2, C15, *a* 5·1, *b* 5·3, *c* 4·6, D15·1, E7·1, F 5·4*t*, *a* 4·5, *b* 4·9, *c* 4·4, G 5·8, *a* 4·8, *b* 5, *c* 4·3, H4·7, I 5·3, J·76, K·81.

A fine large skull of unequivocally Mongolie form, which could hardly be taken for that of a woman, with a very broad, flat face and nose; but she was a patient of Dr. WISE's, who describes her as having more the appearance of a man and quite masculine in *the labours* to which she devoted herself. Dr. HOOKER also says of the people of this tribe, who belong to an independent territory, beyond the British Possessions in the N.E. of Bengal, bordering on Assam:—"many of the women were extremely tall, great stature being common amongst the Munipoorees" (*Journals*, ii. 331). The alisphenoids are totally cut off from the parietals.

Presented by T. A. WISE, M.D., F.R.S.E., by whose kindness I also possess a carefully executed coloured portrait of "AMU," in the squatting posture, which is so common in India. She is tattooed on the outsides of her shoulders and on the backs of her hands, and also has her head shaved. She has a white cotton scarf, with a red border, across the left shoulder and then passed round her loins. The colour of her skin is between No. 3 and No. 21 of BROCA's Tableau Chromatique.

b. *Mishmee Tribe.*

1. 772. Mishmee. "KEYSING." ♂, æt. e. 40. (No. 1.) Calv.

A71, B19·6, C14·2, *a* 4·6, *b* 5·4, *c* 4·2, D14·7, E6·8, F 5·3*p*, *a* 4·7, *b* 4·5, *c* 4·1, G 5·4, *a* 4·4, *b* 4·7, *c* 3·9, I 5·1, J·78, K·79.

This small but rather broad calvarium has no speno-parietal suture on either side. It belonged to a Mishmee Chief, who was hanged for inroads on the villages under British protection.

Presented by J. BERRY WHITE, M.D., and Col. F. JENKINS.

2. 838. Mishmee. ♂, æt. e. 60.

A77, B 20·1, C14·3, *a* 4·7, *b* 5·5, *c* 4·1, D14·5, E7, F 5·6*t*, *a* 4·6, *b* 4·7, *c* 4·1, G 5·5, *a* 4·5, *b* 4·9, *c* 4·2, H4·1, I 5·4, J·80, K·78.

A prognathous skull, wide in the temporal region, and having a feminine air.

3. 839. Mishmee. ♂, æt. e. 40.

A81, B 20·7, C 15, *a* 5, *b* 5·5, *c* 4·5, D 15·2, E 7·3, F 5·6*p*, *a* 4·8, *b* 5, *c* 4·1, G 5·8, *a* 4·9, *b* 5·1, *c* 4·4, H 4·6, I 5·4, J 7·6, K 7·9.

A large skull with broad faec and flat nasals, the interorbital space being 1·2 in. in diameter, and wide, rather prominent jaws.

Nos. 838 and 839 were hanged for murder.

Presented by Dr. F. J. MOUNT.

Average measurements of the skulls of three Mishmee men. A 77, B 20·1, C 14·5, *a* 4·7, *b* 5·4, *c* 4·2, D 14·8, E 7, F 5·5, *a* 4·7, *b* 4·6, *c* 4·1, G 5·5, *a* 4·6, *b* 4·9, *c* 4·1, H 4·3, I 5·3, J 7·8, K 7·9.

One is brachycephalie.

e. Singpho Tribe.

775. Singpho. ♂, æt. e. 45. (No. 4.) Calv.

A 77, B 20·5, C 15·2, *a* 5, *b* 5·5, *c* 4·2, D 14·6, E 7·3, F 5·3*t*, *a* 4·5, *b* 4·6, *c* 4·2, G 5·6, *a* 4·7, *b* 4·8, *c* 4·3, I 5·6, J 7·2, K 7·6.

A very prognathous calvarium of a convict who died in jail.

d. Naga Tribe.

1. 773. Naga. ♂, æt. e. 40.

A 81, B 20·3, C 15, *a* 5·2, *b* 5·3, *c* 4·5, D 15·5, E 7, F 5·6*p*, *a* 4·6, *b* 5·3, *c* 4·2, G 5·8, *a* 5, *b* 5·1, *c* 4·2, H 4·6, I 5·4, J 8·0, K 8·2.

Fine skull of a Freebooter shot on a plundering expedition. The internasal suture is quite oblique. The occipital, atlas, and dentata are all ossified together.

2. 774. Naga. ♂, æt. e. 20. (No. 3.) Calv.

A 73, B 20·3, C 14·5, *a* 4·8, *b* 5·3, *c* 4·4, D 14·8, E 7·1, F 5·6*p*, *a* 4·7, *b* 5·3, *c* 4·3, G 5·2, *a* 4·6, *b* 4·7, *c* 4·1, J 7·9, K 7·1.

The calvarium of a servant-lad of Col. HANNEY's, said to have been about 18; but the crowns of the teeth, except *m.* 3 on the left side, have been nearly worn away. Has a frontal suture. The nasal bones are as nearly absent as possible, being reduced to two merely perceptible particles, so that the orifice may be said to be formed by the superior maxillaries alone; and the *lamina perpendicularis ossis ethmoidei* descends below the diminutive nasals and presents itself at the upper part of the fissure.

Reference.—*Over afwijkingen in den vorm der neusbeenderen*, door Dr. J. VAN DER HOEVEN, Jz., *Nederlandsch Tijdschrift voor Geneeskunde*, 1860.

Nos. 775, 773, and 774 presented by Dr. J. BERRY WHITE.

R. RACES OF BURMAH.

868. Burmese. ♂, æt. e. 35. Calv. D.C.

A81, B20·5, C14·5, *a*5, *b*4·9, *c*4·6, D15·5, E7, F5·7_p, *a*4·5, *b*5·3, *c*4·5, G5·7, *a*4·9, *b*5, *c*4·2, I5·2, J·81, K·81.

A wry brachycephalic calvarium, exhibiting parieto-occipital flattening towards the right side, of a man killed at Rangoon in the attack on the lines, July 1, 1824.

S. RACES OF SIAM.

1. 591. Thai. ♂, æt. c. 35. Calv.

A76, B19·8, C14·6, *a*5·2, *b*5·3, *c*4·1, D15·8, E6·6, F5·6_p, *a*4·6, *b*5·2, *c*4·3, G5·6, *a*4·9, *b*5·1, *c*3·9, I5·2, J·84, K·84.

Very brachycephalic and prognathous, with extremely short spheno-parietal suture, and awry from parieto-occipital flattening on the left side. The right limb of the lambdoid suture is ossified, and the lower half of the internasal.

2. 592. Thai. ♀, æt. e. 35. Calv.

A78, B19·7, C14·5, *a*5·2, *b*4·5, *c*4·8, D15·2, E6·6, F5·7_p, *a*4·6, *b*5, *c*4, G5·6, *a*4·8, *b*4·9, *c*4·1, I5·2, J·86, K·84.

Has a trapezoid interparietal bone, as well as a Wormian bone in the sagittal suture, is awry from parieto-occipital flattening on the right side, and has the same ossification of the lower part of the internasal suture as No. 591.

3. 592*a* & *b*. Thai. Lower jaws.

4. 794. Thai. ♂, æt. e. 60.

A81, B20·5, C15·3, *a*5·2, *b*5·7, *c*4·4, D15·1, E7·4, F5·4_t, *a*4·4, *b*4·8, *c*4·5, G5·7, *a*4·8, *b*5, *c*4·2, H4·7, I5·4, J·73, K·77.

Unlike the others, this fine Siamese skull is dolichocephalic; and the face is not particularly broad. The lower lateral portions of the coronal suture are ossified and obliterated, the nasal bones are unequal, and the lower portion of the internasal suture, again, is effaced. The early synostosis of the outer extremities of the coronal suture has doubtless given rise to the modifications in the form of this skull of a Thai and its deviations from the typical form. See Nos. 1210 (Ancient Briton) and 1029 (English).

5. 795. Thai. ♀, æt. e. 35.

A63, B18·6, C13·5, *a*4·7, *b*4·5, *c*4·3, D13·8, E6·2, F5·4_p, *a*4·3, *b*5, *c*4, G5·4, *a*4·3, *b*4·5, *c*3·8, I1·4·1, I4·9, J·89, K·89.

The calvarium of this very short skull makes a near approach

to a trapezoid, except where it is rendered oblique by parieto-occipital flattening on the left side.

6. 1191. Thai. ♂, æt. c. 50.

A79, B20·2, C14·3, a5·1, b4·9, c4·3, D15·9, E6·6, F5·9p, a4·9, b5·4, c4·3, G5·9, a4·8, b5, c4, H5·1, I5·4, J·89, K·89.

This fine, large, curious skull, so strongly characteristic of the race, is heavy, very short, broad, and elevated to such a degree that its diameters in the two last directions are equal. The scaly portion of the occipital is flat and almost vertical; its tuberosity makes a free process. The Siamese to whom this cranium has belonged appears to have been exposed to some violence, by which the left zygoma has been depressed inwards.

7. 1192. Thai. ♀, æt. c. 30.

A76, B19·3, C14·5, a4·8, b4·9, c4·8, D15·4, E6·5, F5·6p, a4·5, b5·5, c4·1, G5·9, a4·7, b5·1, c4·1, H4·6, I5, J·86, K·90.

The height of the calvarium in this skull (most likely the relief of a woman) rises to ·90 of the length. On the right side she has had a large paramastoid process articulating with the transverse process of the atlas. This abnormal joint has become ankylosed, coincident with an ankylosis of the condyloid processes of the occipital and the articulating surfaces of the atlas, the posterior part of the arch of which vertebra is absorbed, probably by caries, of which there are marks in the left condyle of the lower jaw. These changes have led to permanent wryneck. There is parieto-occipital flattening on the right side, with concurrent depression of the left side of the frontal.

8. 1193. Thai. ♂, æt. c. 30.

A78, B19·7, C14·9, a5, b5·1, c4·8, D15, E6·8, F5·5p, a4·6, b5, c4·3, G6, a4·7, b5, c4·3, H4·8, I5·3, J·80, K·88.

This lofty eranium is remarkably prognathous. The tube-



Fig. 75.—Cranium of a Thai, or Siamese Man.—No. 1193.—Quarter-size.

rosity of the occipital is converted into a process. The spheno-parietal suture scarcely exists on the left side, and is very short on the right.

9. 1194. Thai. ♀, æt. c. 6.

Has a large parieto-occipital flattening, which is quite symmetrical. Even in this child the teeth are stained with betel. In No. 1193 it may be said to form a coating upon the enamel. No. 1194 is of great interest, as it exhibits the typical peculiarities of the race at an early age, proving them congenital.

The exaggerated brachycephalism of the crania of the Thai of Siam is well demonstrated in this very fine series of their skulls. No. 794 is the only exception, and is abnormal. With such natural brachycephalism there is frequently seen conjoined parieto-occipital flattening, which is often unsymmetrical, rendering both the frontal and occipital regions oblique, and leaving no doubt of its being artificial, although merely accidental or unintentional. This latter point I inferred; and in the hope of obtaining some light upon the causes of such deformation, I have made particular inquiries at Bangkok respecting the mode of nursing infants practised by Siamese women, trusting that some insight might thus be gained as to the parieto-occipital flattening observed among skulls of ancient races. By the courtesy of Sir Robert H. SCHOMBURGK, my queries were placed in the hands of Dr. Jas. CAMPBELL, R.N., Surgeon to the Consulate at Bangkok. In reply, Dr. CAMPBELL says, "The peculiarity referred to is very common in Siam, but is not produced by the use of any mechanical means, as no custom of flattening the occiputs of infants prevails. On the contrary, soft pillows are used and the child is permitted to toss about and sleep in any position it may assume, without, as a rule, any article of dress whatever. Grown people often make use of a wooden pillow, but this has no relation to the deformation in question, which is not only commonly seen, but," Dr. CAMPBELL testifies, "from birth,"—no doubt, from an early age. PALLEGOIX tells us that the Siamese women suckle their children for two or three years (*Descrip. du Royaume Thai ou Siam*, 1854, i. 224). There is no doubt the deformation here alluded to is occasioned by the child's habitually selecting a position on its back, with the head always on the same side, of course on a hard plane surface.

These very rare specimens of the crania of the Thai, or Siamese, who burn the dead, were kindly procured of the Siamese government from the place of cremation at Bangkok, and presented by the late Sir Robert H. SCHOMBURGK¹. Their

¹ In the *Athenæum* of July 30, 1859, Sir R. H. SCHOMBURGK has given a very curious account of this place of cremation at Bangkok; and in the *Athenæum* of July 26, 1862, he narrates the proceedings at the grand state ceremony of the burning of the body of Queen RAMBERG.

teeth are deeply stained with betel. The only other examples I am aware of are one mentioned by Dr. J. A. MEIGS as being in the Mortonian Coll. (No. 123), although it does not appear in the *Catalogue*, and two which are contained in the Collection formed by the late Prof. Ib IBSEN, in the Anatomical Museum at Copenhagen. These last have grooves made in their front teeth, like those of the races of the Indian Archipelago.

Average Measurements of Thai Skulls.

♂, averages of three skulls of men. A 77·6, B 19·9, C 14·6, a 5·1, b 5·1, c 4·4, D 15·5, E 6·6, F 5·6, a 4·7, b 5·2, c 4·3, G 5·8, a 4·8, b 5, c 4, H 4·9, I 5·2, J 85, K 87.

Extremes, A 76–79, J 80–89, K 84–89.

All brachycephalic.

♀, averages of three skulls of women. A 70·5, B 19·2, C 14·1, a 4·9, b 4·6, c 4·6, D 14·8, E 6·4, F 5·5, a 4·4, b 5·1, c 4, G 5·6, a 4·6, b 4·8, c 4, H 4·3, I 5, J 86, K 87.

Extremes, A 63–78, J 86–89, K 84–90.

All strongly brachycephalic.

♂ and ♀, averages of six skulls. A 74, B 19·5, C 14·3, a 5, b 4·8, c 4·5, D 15·1, E 6·5, F 5·5, a 4·5, b 5·1, c 4·1, G 5·7, a 4·7, b 4·9, c 4, H 4·6, I 5·1, J 84, K 87.

T. RACES OF CHINA.

1. 26. Chinese. *Amoy*. ♂, æt. e. 90.

B 19·6, C 14·9, a 4·9, b 5, c 5, D 14, E 7, F 5·1^t, a 4·2, b 4·8, c 3·9, G 5·4, a 4·7, b 4·7, c 3·9, I 5, J 72, K 77.

This cranium has belonged to a very aged person, and, besides the almost edentulous jaws, it is distinguished by being exceedingly thin, and is also deformed by atrophy, in a large depressed surface extending lengthwise along the centre of each parietal¹, the result of senile shrinking of the brain.

¹ This senile atrophy is seen in other examples of the Collection, as Nos. 212, 243, 609, 927, and 1124.

This hitherto little observed morbid alteration of the bones, particularly of the head, forms the chief subject of an excellent memoir by Prof. Rudolf VIRCHOW, *Ueber die Involutionkrankheit (Morum senile) der platten Knochen, namentlich des Schädels* (*Gesammelte Abhandlungen*, 1856, ii. 1000). In this memoir some cases are adduced and references made to other writers who have observed these changes. ROKITANSKY says, "Merkwürdig ist eine meist bei greisen und decrepiten Individuen vorkommende symmetrische

2. 27. Chinese. *Amoy*. ♀, æt. c. 25.

A71, B19·5, C14·6, a5·2, b4·9, c4·5, D14·6, E6·9, F5·3p, a4·3, b5, c4, G5·7, a4·7, b4·8, c4·1, H4·5, I4·6, J·76, K·82.

A beautiful skull of a woman with long and narrow face. The slender nasals are united by an oblique or twisted suture.

These two skulls were collected by Dr. WINCHESTER, at Amoy.

3. 77. Chinese. *Hongkong*. ♂, æt. e. 25.

E. B. P.

A71, B19·8, C14·8, a4·7, b5·1, c5, D14·8, E7, F5·4p, a4·3, b5, c4·1, G5·5, a4·8, b4·9, c4·2, H4·5, I5·1, J·77, K·78.

Has a large interparietal on the left side, its suture running down the middle of the occipital; a *single* nasal bone of linear form (see No. 774, *Naga*); a wide interorbital space; the right lower tooth (*m.* 3) is being cut by the side, and to its inside is attached a nodular process of enamel; and a slight parieto-occipital flattening towards the right side.

4. 111. Chinese. *Ningpo*. ♂, æt. e. 35.

A76, B20·2, C14·4, a5, b5, c4·4, D14·5, E6·9, F5·4t, a4·4, b5·2, c4·4, G5·6, a4·5, b4·8, c3·9, H5, I5·2, J·78, K·81.

The internasal suture is very oblique.

5. 114. Chinese. *Ningpo*. ♂, æt. e. 80. Calv.

A77, B20·4, C14·8, a5, b5, c4·8, D15·3, E7, F5·9p, a4·5, b5·5, c4·2, G5·5, a4·7, b4·8, c4, I5·3, J·84, K·78.

An edentulous calvarium of an old man.

6. 115. Chinese. *Ningpo*. ♂, æt. e. 25. Calv.

B19·5, C14·8, a4·9, b4·9, c5, D14·5, E6·8, F5·2p, a4·4, b4·7, c4·2, G5·5, a4·8, b5, c4·2, I5, J·76, K·80.

This young man's calvarium is very prognathous. It bears traces of decapitation; and the large orifice at the vertex was probably occasioned by injuries which attended the decapitation.

Verdünnung der Schädelwand auf der Höhe der Seitenwandbeine." He thinks it may not improbably have some connexion with syphilis, which appears to be doubtful. It is remarkable that this atrophy should usually be so symmetrical on the two sides; and it appears to commence externally. In the great work of GALL and SPURZHEIM good examples of this pathological condition are represented, to which VIRCHOW does not refer (*Anatomie et Physiologie du système nerveux en général et du cerveau en particulier*, 1819, fol., pl. xlv. and xlvii.).

There is an excellent instance of the same morbid condition in the Anatomical Collection of the Carolinska Institute, at Stockholm. It is a thin calvarium (No. 17) with a depression along the sagittal suture, and two others running parallel, one along the centre of each parietal; both these depressions are converted into holes in their middles. It is labelled "Atrophia externa senilis."

7. 116. Chinese. *Ningpo*. ♂, æt. c. 45. Calv.

A70, B19·8, C14·5, *a*4·7, *b*5·2, *c*4·6, D14·1, E7, F5·4*p*, *a*4·2, *b*5·2, *c*4·2, G5·2, *a*4·3, *b*4·6, *c*4·2, I5, J·77, K·74.

8. 118. Chinese. *Ningpo*. ♂, æt. c. 20. Calv.

A86, B20·3, C15·6, *a*5·3, *b*5·5, *c*4·8, D14·7, E7·7, F5·5*p*, *a*4·6, *b*5, *c*4·3, G5·7, *a*4·9, *b*5, *c*4·4, J·71, K·77.

Bears distinct marks of decapitation.

9. 119. Chinese. *Ningpo*. ♂, æt. c. 50. Calv.

A75, B20·3, C14·7, *a*4·8, *b*4·4, *c*5·5, D14·6, E7·1, F5·3*p*, *a*4·6, *b*5, *c*4·5, G5·5, *a*4·5, *b*4·7, *c*4·4, I5·4, J·74, K·77.

Has the *pneumatic process* of HYRTL on both sides.

Nos. 111 to 119 the skulls of pirates executed at Ningpo in 1851. Presented by Sir Jno. BOWRING, Governor of Hong Kong.

10. 261. Chinese. ♂, æt. c. 20.

A73, B20·3, C15, *a*4·9, *b*5·4, *c*4·7, D14·3, E7·1, F5·3*t*, *a*4·5, *b*4·6, *c*4·5, G5·7, *a*4·7, *b*5, *c*4·4, H4·6, I5·5, J·74, K·80.

Found under the floor of the house of a Dayak, in Borneo, and has holes in it for suspension to the ceiling and for attachment of the lower jaw, according to Dayak custom.

Presented by Mr. A. R. WALLACE, the distinguished naturalist.

11. (284.) Chinese. "ENG KOI." ♂, æt. c. 35.

A74, B20·2, C14·5, *a*4·9, *b*5·2, *c*4·4, D14·4, E6·8, F5·7*t*, *a*4·7, *b*5·3, *c*4·2, G5·4, *a*4·5, *b*4·8, *c*3·9, H4·8, I5·4, J·83, K·79.

"ENG KOI" was chief of an insurrection at Mintrallo, in Borneo, and was hanged.

Presented by Dr. Geerlaf WASSINK.

12. 460. Chinese. *Amoy*. ♂, æt. c. 40.

A92, B21·2, C15·4, *a*5·2, *b*5·3, *c*4·9, D15·6, E7·4, F5·6*p*, *a*4·9, *b*4·9, *c*4·7, G5·9, *a*5·1, *b*5·3, *c*4·4, H4·9, I5·6, J·75, K·79.

This fine and very large skull of a man in early life, a native of Amoy, who died from an enormous hepatic abscess, is affected with a premature ossification of the sutures. They are almost all nearly ossified and effaced. Has a parieto-occipital flattening towards the right side.

Presented by Dr. BROEKMEIJER, Director of Civil and Military Medicine at Makassar and Sourabaya.

13. 600. Chinese. ♂, æt. c. 35. Calv.

B19·8, C14·7, *a*4·8, *b*5·1, *c*4·8, D14·8, E7, F5·4*p*, *a*4·4, *b*5·2, *c*4·3, G5·7, *a*4·6, *b*4·8, *c*4·1, I5·2, J·77, K·78.

Calvarium of an escaped prisoner who was shot in his recapture, in 1856, in the island of Oahu.

Presented by Mr. W. L. GREEN, Honolulu, Sandwich Islands.

14. 1168. Chinese. *Hong Kong*. ♂, æt. c. 50.
A76·5, B20·3, C14·8, a4·9, b5·2, c4·7, D14·4, E7·2, F5·6t, a4·7,
b4·9, c4·3, G5·4, a4·5, b4·6, c4·1, H5, I5·3, J·77, K·75.

15. 1169. Chinese. *Hong Kong*. ♂, æt. c. 50.
A77, B20·5, C15, a5·1, b5·4, c4·5, D14·9, E7·1, F5·5t, a5,
b5·1, c4·1, G5·5, a4·7, b4·8, c4, H4·9, I5·2, J·77, K·77.

Has a frontal suture. The right nasal bone has been injured.

16. 1170. Chinese. *Hong Kong*. ♀, æt. e. 40.
A65, B19·5, C13·7, a4·7, b4·6, c4·4, D14·2, E6·7, F5·3p, a4·5,
b5, c4·2, G5·3, a4·4, b4·6, c4, H4·7, I5·3, J·79, K·79.

17. 1171. Chinese. *Hong Kong*. ♀, æt. c. 70.
A67, B19·2, C14·3, a4·8, b5·1, c4·4, D14·2, E6·7, F5·4t, a4·4,
b4·9, c4·2, G5·4, a4·5, b4·8, c3·7, H4·4, I4·7, J·80, K·80.

Exhibits the *processus papillares* of HALBERTSMA, but of unequal lengths, and constitutes his Form D of the *condylus tertius* (*De derde Gewrichtsknobbel* (cond. tert.) *van het Achterhoofdsbeen*, pl. ii. fig. 2).

Nos. 1168 to 1171 presented by J. IVOR MURRAY, M.D., Colonial Surgeon.

18. 1350. Chinese. ♂, æt. c. 30. "*Mountain Chinese*." V.L.d.J.
A78, B19·9, C14·9, a5, b5·3, c4·6, D14·6, E7, F5·4p, a4·5,
b5, c4·3, G5·7, a4·5, b4·8, c4·2, H4·9, I5·1, J·77, K·81.

This beautiful skull of a mountain-Chinese, who died at Batavia, is very thin and light. The plates of the ethmoid and superior maxillary entering into the orbits, and the lachrymal and turbinated bones, are semitransparent. Has a rhomboidal triquetral bone in each limb of the lambdoid suture.

19. 1351. Chinese. ♂, æt. c. 35. V.L.d.J.
A90, B21·8, C15·7, a5·5, b5, c5·2, D15·7, E7·4, F6·1p, a5·2,
b5·5, c4·3, G5·8, a4·9, b5·2, c4·6, H4·7, I5·6, J·82, K·78.

Died in the Chinese Hospital at Batavia. An immense skull, which is asymmetrical from bulging out in the region of the anterior inferior angle of the right parietal.

20. 1352. Chinese. ♂, æt. c. 35. V.L.d.J.
A78, B20·4, C15·2, a4·9, b5·1, c5·2, D15·4, E7·2, F5·6p, a4·4,
b5·2, c4·2, G5·8, a4·6, b4·9, c4·3, H4·8, I5·2, J·77, K·80.

21. 1353. Chinese. ♀, æt. c. 50. V.L.d.J.
A70, B19·2, C14·3, a4·5, b5·5, c4·3, D13·9, E6·8, F5t, a4·3,
b4·4, c3·9, G5·6, a4·4, b4·7, c4, H4·5, I5, J·73, K·82.

This narrow, tall skull has a frontal suture; and the other sutures are very open.

22. 1354. Chinese. ♂, æt. c. 20. Macao. V.L. d. J.
A78, B20·2, C15·1, a5·1, b5·1, c5, D14·9, E7·1, F5·6p, a4·4,
b5·3, c4·3, G5·7, a4·8, b5, c4·3, H4·5, I4·8, J78, K·80.

The third molars appear not to have been developed. A triquetral bone in each spheno-parietal suture.

A "Chinese thief," who was born at Macao and died at Batavia.

23. 1355. Chinese. ♀, æt. c. 17. V.L. d. J.
A61, B19·2, C13·7, a4·6, b4·4, c4·7, D12·5, E6·9, F4·9p, a4·3,
b4·2, c4, G4·8, a4, b4·3, c4, H3·9, I4·6, J·71, K·69.

The diminutive skull of a Chinese girl, who was murdered at a feast at Batavia. Has a frontal suture. Slightly klinocephalic.

From Baron VAN DER CAPELLEN.

Average Measurements of Chinese Skulls.

17 skulls of Chinese men. A78·1, B20·2, C14·9, a4·9, b5·1,
c4·8, D14·7, E7·1, F5·5, a4·5, b5, c4·3, G5·6, a4·6,
b4·9, c4·2, H4·7, I5·2, J·77, K·78.

Extremes, A70-92, J·71-84, K·74-81.

4 skulls of Chinese women. A68, B19·3, C14·2, a4·8, b5,
c4·4, D14·2, E6·7, F5·2, a4·3, b4·8, c4, G5·5, a4·5,
b4·7, c3·9, H4·5, I4·9, J·77, K·82.

Extremes, A65-71, J·73-80, K·79-82.

Averages of 21 skulls of Chinese men and women. A73, B19·7,
C14·5, a4·8, b5, c4·6, D14·4, E6·9, F5·3, a4·4, b4·9,
c4·1, G5·5, a4·5, b4·8, c4·5, H4·6, I5, J·76, K·79.

Four brachycephalic.

References.—BLUMENBACH, *Dec. Cran.* Tab. xxiii. "Sinensis Daürici," Tab. xlv., Tab. lxiv. "Fem. Sin. hybridæ." G. SANDIFORT, *Tab. Cranior.* "Cranium Chinensis." J. VAN DER HOEVEN, *Tijdschrift voor natuurl. Geschiedenis en Physiol.* iii. 143. Id. *Jets over Sinezen en Japanners als voorbeelden van den Mongoolschen menschenstam*, pl. iv. en vi. Id. *Catalogus*, p. 43. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 43. LUCÆ, *Zur organisch. Formenl.* Taf. v. It is much to be regretted that this accomplished craniologist should have abandoned the fine plates of this work for his geometrical delineations, which have no recommendation; even as affording the dimensions of the skulls they cannot be depended upon. Id. *Zur Morphologie der Rassen-Schädel*, 2 Abtheil., 1864, 4to. VON BAER, *Crania Selecta*, Tab. 10, 11, 12, 13. MAGGIORANI, *Sui Caratteri della Stirpe Cinese*, Roma, 1860, 4to, 2 tavole. RETZIUS, *Ethnolog. Schriften*, pl. ii. fig. i. W. VROLIK, *Catalogue*, p. 31. The VROLIK Museum is rich in Chinese skulls, the entries extending to 20.

U. RACES OF JAPAN.

Japanese.

1. 1356. Japanese. ♀, æt. c. 35. V.L.d.J.
A 57, B 18·3, C 13·4, *a* 4·5, *b* 4·7, *c* 4·2, D 13·6, E 6·2, F 5·1*p*, *a* 4·2,
b 4·9, *c* 3·9, G 5·2, *a* 4·3, *b* 4·5, *c* 3·6, H 4, I 4·8, J·82, K·83.

An unusual ease of synostosis. The right squamous suture and the right zygomatic suture are entirely ossified and untraceable; the coronal, sagittal, and lambdoid very partially affected. No apparent deformation has resulted.

This woman died at Batavia; and her skull bears marks of her having been in Java, the upper front teeth being grooved; and the whole of her teeth blackened with betel, which, however, is in use in Japan also.

2. 1357. Japanese. ♂, æt. c. 45. V.L.d.J.
A 73, B 19·9, C 14·4, *a* 5, *b* 5·2, *c* 4·2, D 15, E 6·7, F 5·7*p*, *a* 4·7,
b 5·1, *c* 4·4, G 5·4, *a* 4·8, *b* 4·8, *c* 3·7, H 5, I 5·4, J·85, K·80.

Has a triquetral bone in the left spheno-parietal suture.
Died at Batavia.

References.—G. SANDIFORT, *Tab. Cran. div. Nat.*, "Cranium Japonensis." J. VAN DER HOEVEN, *Jets over Sinezen en Japaners als voorbeelden van den Mongoolschen menschenstam*, pl. v., *Tijdschrift voor Natuurlijke Geschiedenis*, 3 Deel.

III. AFRICAN RACES.

A. RACES OF EGYPT.

a. *Ancient Race.*

1. 55. Egyptian. ♂, head of bituminized mummy. E. B. P.
B 21, E 7·4, F 5·7*p*, I 5·3, J·77.

Has short locks of flowing, reddish-brown hair.

2. 249. Egyptian. ♀, young. Head of bituminized mummy.

Has long reddish-brown hair, which is plaited and fastened behind. Orthognathous face, which is almost in the form of a triangle from its shortness, the width of the forehead, and the pointed chin; has a beautiful nose and has been gilt.

3. 250. Egyptian ♀, head of bituminized mummy.

Has a narrow face with long slender nose.

4. 251. Egyptian. ♀, of mature age. Head of bituminized mummy.

F 5·8 *p*, I 5·2.

Has a fine forehead, a long, slightly prognathous face, and long nose. Hair, which is a little darker, is plaited and fastened behind. Has had earrings, which have been torn out.

5. 252. Egyptian. ♂, of middle age. Bituminized head of mummy.

E 7·2, F 5·7 *p*, I 4·7?, J 7·9.

Has a long, very orthognathous, and handsome face, which is gilt, and an aquiline nose.

6. 253. Egyptian. ♂, of good age. Bituminized head of mummy.

A large head, with a long, pointed nose, and rather broad face.

7. 254. Egyptian. ♂, of middle age. Head of bituminized mummy.

B 20·8, E 7·1, F 5·6 *p*, I 5·2, J 7·8.

Hair in short, very curly, reddish-brown locks; face long, and gilt.

8. 255. Egyptian. ♂, large head of bituminized mummy.

9. 256. Egyptian. ♂, large head of bituminized mummy.

Nos. 249 to 256 were obtained at Thebes, and presented by the late A. Henry RHIND, Esq., F.S.A.L. & S.—*Thebes, its Tombs and their Tenants*, by A. Henry RHIND, 1862.

10. 1124. Egyptian. ♀, of great age. From a mummy.
A 61, B 20·3, C 14, *a* 4·8, *b* 4·7, *c* 4·5, D 13·4, E 7·2, F 5·2 *t*, *a* 4·3,
b 5·1, *c* 4, I 5, J 7·2.

The atrophy of age manifests itself, as in No. 26, by depressions along the sagittal suture and the middle of each parietal. The inner surface of the calvaria is almost even, the atrophy having scarcely affected the inner table. The entire skull weighs only 14 oz. The ethmoid bone is pierced with two holes, each about half an inch in diameter, on the sides of the *crista galli* (which remains uninjured), for the purpose of extracting the brain. The head was covered all over with hair about 4 inches long, not

grey, but of a bright and very light brown. This mummy appears to have been prepared without the preliminary process of steeping in brine, as no salt was found in the bones. Still this process may probably be regarded as the great essential of mummification, whether Egyptian or Guanehe. All the Guanehe mummies, the skulls of which are to be described immediately, had been steeped in brine. HERODOTUS tells us that the Egyptian embalmers had to steep the body 70 days in a solution of *natron*. M. J. N. GANNAL (*Hist. des Embaumements*, 2^e éd., 1841) regards the thorough *drying* of the body as the principal part of the process, both among the Guanehes and Egyptians, and even says that this drying was effected during the 70 days preparation (p. 95). But these 70 days appear to have been chiefly devoted to wetting, not drying the body.

11. 49. Egyptian. ♂, æt. e. 20. Calv.

B 21, C 15·1, *a* 4·9, *b* 5·6, *c* 4·6, D 14·6, E 7·5, F 5·3 *t*, *a* 4·8, *b* 4·4, *c* 4·5, G 5·4, *a* 4·8, *b* 4·9, *c* 4·3, J·70, K·72.

A dolichocephalic calvarium of a young man.

12. 50. Egyptian. ♂, æt. e. 80. Imperf. calv.

B 20·3, C 14·1, *a* 5, *b* 5·1, *c* 4, D 14·6, E 7, F 5·8 *t*, *a* 4·6, *b* 5·4, *c* 4·2, G 5·2, *a* 4·6, *b* 4·7, *c* 4, I 5·3, J·82, K·74.

A brachy- and platycephalic calvarium of an aged man, with a large aquiline nose, producing a Jewish appearance.

13. 51. Egyptian. ♂, æt. e. 50. Imperf. calv.

B 20·7, C 14·7, *a* 4·8, *b* 5·2, *c* 4·7, D 14·8, E 7·1, F 5·8 *t*, *a* 4·9, *b* 4·6, *c* 4·4, G 5·4, *a* 4·6, *b* 4·8, *c* 4·2, I 5·6, J·81, K·76.

Has a depression about an inch and a half in diameter in the posterior superior angle of the right parietal.

14. 52. Egyptian? ♀, æt. e. 16. Imperf. calv.

B 19, C 13·5, *a* 4·6, *b* 4·6, *c* 4·3, D 13·7, E 6·3, F 5·3 *p*, *a* 4·3, *b* 5·1, *c* 4·1, G 5·1, *a* 4·3, *b* 4·5, *c* 3·8, J·84, K·80.

With this girl's brachycephalic skull were found a small brass coin, with a hole in it for suspension, and a rude double bead of enamel, brown and yellow.

Nos. 49 to 52 were found, in 1853, in an ancient cemetery, called by the Arabs "Ksor Fares," by Europeans "Caesar's Camp," about two miles and a half from Alexandria. The entire absence of animal matter from the bones, independent of the objects discovered with the human remains, proves their great antiquity. The tombs have been said to be those of the Jews of Alexandria; but Sir Gardner WILKINSON thinks this is incorrect. A Græco-Egyptian terra-cotta lamp was met with in one of them.

Presented by Isaac Ben Haim PINTO, Esq. See PRUNERBEY, *Crânes trouvés à Alexandrie*, Bull. de la Soc. d'Anthrop. 2^e sér. i. 44.

References.—BLUMENBACH, *Tab. Cran.* Tab. i. et xxxi. T. J. PETTIGREW, *A Hist. of Egyptian Mummies*, 1834, 4to; in which are contained two excellent plates by Geo. CRUIKSHANK. One of these is an embalmed head (full size), the face of which has been gilt; and the other a full-length figure of the mummified body of an ancient Egyptian. VIMONT, *Traité de Phrénologie*, 1836, fol., pl. C. fig. 2. *Crâne d'une momie apportée d'Egypte*, par M. GEOFFROY ST.-HILAIRE. The elaborate investigation of Dr. S. G. MORTON, entitled *Crania Ægyptiaca*, 1844, 4to: this work contains a large number of good figures of embalmed heads, of crania, and of calvaria. A passage in Dr. MORTON's last, unfinished work, posthumously published, is of sufficient importance to be inserted here. He writes, "I am compelled by a mass of irresistible evidence to modify the opinion expressed in the *Crania Ægyptiaca*, viz. that the Egyptians were an Asiatic people. Seven years of additional investigation, together with greatly increased materials, have convinced me that they were neither Asiatics nor Europeans, but aboriginal and indigenous inhabitants of the Valley of the Nile, or some contiguous region—peculiar in their physiognomy, isolated in their institutions, and forming one of the primordial centres of the human family"¹. The curious and minute inquiry of Dr. JOHANN CZERMAK, of Prag, *Beschreibung und mikroskopische Untersuchung zweier ägyptischer Mumien*, Sitzungberichte of the Vienna Academy, ix. 427. C. G. CARUS, *Atlas der Cranioscopie*, H. ii. Taf. iv.; *Neuer Atlas der Cranioscopie*, 1864, fol., Taf. xxiii. PRICHARD, *Res. Phys. Hist. Mank.* 2nd ed. i. pl. 4. fig. 2. Dr. F. PRUNERBEY, *Die Ueberbleibsel der altägyptischen Menschenrace*, 1846, 4to, 2 Taf.: the tables of this excellent memoir contain heads from the monuments, and portraits of then living Egyptians who were not distinguishable from the former. Id. *Mém. de la Soc. d'Anthrop.* i. pl. xii., xiii. RETZIUS, *Ethnolog. Schriften*, pl. i. fig. v.

b. Modern Races.

53. Egyptian. *Fellah?* ♂, æt. c. 55. Imperf. calv.
B19·4, C14, a4·5, b4·8, c4·7, D14·2, E6·8, F5·4p, a4·3, b5·1,
c4·1, G5, a4·1, b4·5, c4, J·79, K·73.

This calvarium was picked up by Mr. PINTO in the above-named cemetery; but, as it retains a good portion of its animal constituents, I judge it to be modern.

1015. Arab. ♂, æt. e. 60. Calv. D.C.
A67, B20·1, C14·4, a4·7, b5·1, c4·6, D14·5, E7·1, F5·4p,
a4·3, b5, c4, G5, a4·3, b4·8, c4·7, I4·8, J·76, K·70.

A singularly formed calvarium, certainly not Negroid, in-

¹ *Types of Mankind*, 1854, p. 318.

scribed "Arab skull brought from the foot of the Pyramids." It is prognathous, with a long nose; long, low, rather narrow; flat in the frontal, prominent in the supra-occipital region, the centre of the auditory foramen is at least half an inch in advance of the plane of the junction of the sagittal with the coronal suture; the trumpet-shaped auditory openings ascend upward from the sides of the mastoids; there is a *pneumatic process* of HYRTL on the left side; the alisphenoid is separated from the parietal; and there is a fronto-squamosal suture fully a third of an inch long on both sides.

e. *Other Arabs.*

1. 846. Arab of the Great Desert. ♀, æt. e. 45. Calv. D.C.
A71, B19·8, C14·2, a4·8, b5, c4·4, D14·3, E6·8, F5·3p, a4·3,
b4·5, c4, G5·3, a4·5, b4·7, c4·2, I5, J·78, K·78.

The coronal, sagittal, and lambdoid sutures are all nearly ossified.

2. 849. Arab. ♂, æt. e. 70. Calv. D.C.
B19·5, C14·2, a4·5, b5·2, c4·5, D14·2, E6·8, F5·4t, a4·3,
b4·6, c4·2, G5·2, a4·4, b4·6, c3·9, I5·1, J·79, K·76.

3. 872. Arab of the Great Desert. ♂, æt. e. 70. Imperf. calv. D.C.

4. 955. Arab of the Great Desert. ♀, æt. e. 40. Imperf. calv. D.C.
A76, B20·3, C14·5, a4·8, b5·6, c4·1, D14, E7, F5·5p, a4·8,
b4·7, c4·3, G5, a4·5, b4·8, c3·9, J·78, K·71.

5. 956. Arab of the Great Desert. ♀, æt. e. 40. Calv. D.C.
A69, B20, C14·1, a5·3, b4·7, c4·1, D13·5, E7, F5·3t, a4·4,
b4·8, c4·1, G5, a4·2, b4·6, c4·2, I4·6, J·75, K·71.

Average measurements of 3 skulls of Arab women of the Great Desert. A71·2, B19·9, C14·2, a4·9, b5·4, c4·2, D13·9, E6·9, F5·3, a4·5, b4·6, c4·1, G5·1, a4·4, b4·6, c4, I4·7, J·77, K·73.

6. 1031. Arab. Tangiers. ♀, æt. e. 19. Calv. D.C.
A69, B19·7, C13·9, a4·8, b4·7, c4·4, D14, E6·8, F5·4t, a4·7,
b4·5, c4·2, G5·2, a4·4, b4·5, c3·8, I4·7, J·79, K·76.

Died of famine at *Tangiers*.

All these Arab calvaria are dolichocephalie.

B. RACES OF ALGERIA &c.

562. Kabyle. ♂, æt. c. 35. Calv.

A 69, B 20, C 14·1, a 4·9, b 4·4, c 4·8, D 14·8, E 7·1, F 5·4p, a 4·5, b 4·8, c 4·2, G 5·2, a 4·5, b 4·7, c 4·3, I 5·3, J·76, K·73.

A prognathous, ovoid calvarium of a man, who died in the Hôpital Civil at Algiers, August 1852. The right alisphenoid does not meet the parietal, the left only slightly.

This is a calvarium of great interest, as belonging to one of the *autochthones* of northern Africa; for such the Kabyles have been generally considered by BORY DE ST. VINCENT (who confounded them with the Moors), PERIER, BERBRUGGER, and others. The distance between the orbits is great, and the nasals are long and flat—African features. The chief observers have attributed a *round* skull to the Kabyles and an oval one to the Arabs, as BERBRUGGER and AUSELIN.

References.—BORY DE ST. VINCENT, *L'Anthrop. de l'Afrique Franç.* 1845 (2 figs. of the head of a Kabyle). PERIER, *Frag. Ethnol.* p. 110; *Bull. de la Soc. d'Anthrop.* i. 155, where he reviews Jules René AUSELIN's *Essai*. BERBRUGGER, *Algérie hist. pitt. et monum.* 1843, fol., Des races diverses, p. 9. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 45. figs. 5, 6.

1. 563. Moor. ♂, æt. c. 70. Calv.

A 71, B 20, C 14·7, a 5·3, b 5, c 4·4, D 14·7, E 7, F 5·3t, a 4·7, b 4·5, c 4·1, G 5·3, a 4·8, b 4·8, c 3·8, I 4·9, J·75, K·75.

2. 564. Moor. ♀, æt. c. 50. Calv.

A 65, B 19·5, C 14·2, a 5, b 5, c 4·2, D 14·2, E 6·9, F 5·1t, a 4·4, b 4·7, c 4·1, G 5·3, a 4·7, b 4·8, c 3·8, I 5, J·74, K·76.

3. 565. Moor. ♀, of good age. Imperf. calv.

B 20·4, C 14·7, a 4·9, b 5·1, c 4·7, D 14·4, E 7·1, F 5·5p, a 4·8, b 5, c 4·2, G 5·5, a 4·7, b 4·8, c 4·2, J·77, K·77.

These three calvaria of Algerine Moors were derived from an old cemetery at Agha, near Algiers.

Nos. 562 to 565 were presented by Dr. A. BERTHERAND, of Algiers.

Reference.—DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 45. figs. 1, 2, 3, 4.

1. 845. Berber. *Mount Atlas*. ♀, æt. c. 35. Calv. D.C.

A 65, B 19·5, C 14, a 4·6, b 4·7, c 4·7, D 13·5, E 6·9, F 5·1p, a 4·3, b 4·8, c 4·1, G 5, a 4·2, b 4·4, c 3·9, I 4·7, J·74, K·72.

2. 874. Berber. *Mount Atlas*. ♀, æt. c. 65. Calv. D.C.

A 67, B 19·8, C 14·5, a 4·9, b 5·1, c 4·5, D 13·7, E 6·9, F 5·2t, a 4·6, b 4·7, c 4, G 5·4, a 4·5, b 4·6, c 3·9, I 4·5, J·75, K·78.

3. 953. Berber. *Mount Atlas*. ♀, æt. c. 30. Calv. D.C.
A78, B20·2, C15·1, a5·2, b4·9, c5, D14·5, E7·3, F5·2p, a4·4,
b4·9, c4, G5·5, a4·7, b4·8, c4, I5, J·71, K·75.

Awry from parieto-occipital flattening towards the left side.

4. 954. Berber. *Mount Atlas*. ♀, æt. c. 70. Calv. D.C.
A70, B20·2, C14·7, a5·4, b4·8, c4·5, D14·1, E7·2, F5·2p,
a4·5, b4·7, c4·1, G5·2, a4·5, b4·6, c4·1, I5, J·72, K·72.

Average measurements of 4 skulls of Berber women. A70, B20,
C14·6, a5, b4·9, c4·7, D13·9, E7, F5·1, a4·4, b4·8, c4,
G5·2, a4·5, b4·6, c4, I4·8, J·73, K·74.

All dolichocephalic.

C. ANCIENT RACE OF TENERIFFE.

1. 25. Guanche. Superior maxillaries and teeth, save two middle and left outer incisors.

2. 79. Guanche. ♀, æt. c. 40. Calv.
A65, B19·5, C14·4, a4·9, b4·8, c4·7, D13·7, E6·9, F5·2p, a4·3,
b4·8, c4·1, G5·1, a4·2, b4·4, c4, I4·9, J·75, K·73.

3. 80. Guanche. ♂, æt. c. 60? Calv.
A73, B20·3, C14·2, a4·8, b4·7, c4·7, D14·6, E7·1, F5·5p,
a4·7, b5, c4·3, G5·1, a4·5, b4·6, c4·3, I5·3, J·77, K·71.

The coronal suture is very intricate and minute in its serrations in the middle of its lateral portions, until it reaches within an inch of the alisphenoid, when it becomes plain and is obliterated. The left canine is still retained in the alveolus, and behind the two incisors. There is the scar of a serious injury on the right side of the frontal.

4. 81. Guanche. ♀, æt. c. 16. Calv.
A77, B20·3, C14·9, a4·7, b5·3, c4·9, D14, E7·2, F5·5p, a4·5,
b5·2, c4·2, G5, a4·5, b4·7, c4·2, I4·5, J·76, K·69.

There are two long triquetals in the right spheno-parietal and squamous sutures.

5. 82. Guanche. ♀, æt. e. 40. Calv.
A75, B20·6, C14·6, a5·2, b4·9, c4·5, D14·4, E7·2, F5·6p,
a4·8, b4·8, c4·1, G5·2, a4·5, b4·7, c4·1, I5, J·77, K·72.

Has the same peculiar complexity of the coronal suture as Nos. 80 and 144. The crowns of the teeth are worn off, but in the most irregular manner.

6. 83. Guanche. ♀, æt. c. 7. Calv.
A 74.

7. 85. Guanche. ♀, æt. c. 70. Calv.
A 75, B 20·7, C 14·4, *a* 4·8, *b* 4·6, *c* 5, D 14, E 7·2, F 5·7*p*, *a* 4·5,
b 5·4, *c* 4·3, G 4·9, *a* 4·3, *b* 4·5, *c* 4·3, I 5, J 79, K 68.

This calvarium, platycephalic in its form, is affected with plastic deformity¹.

8. 87. Guanche. ♀, æt. c. 35. Calv.
A 66, B 19·6, C 13·7, *a* 4·9, *b* 4·5, *c* 4·3, D 14, E 6·8, F 5·4*p*, *a* 4·5,
b 4·7, *c* 4·2, G 5·1, *a* 4·4, *b* 4·5, *c* 3·9, I 4·8, J 79, K 73.

Has triquetral bones like No. 81 on both sides.

9. 88. Guanche. ♀, æt. c. 60. Calv.
A 69, B 19·5, C 13·7, *a* 5·1, *b* 4·3, *c* 4·3, D 14·1, E 6·6, F 5·5*p*,
a 4·6, *b* 5·1, *c* 4·3, G 5, *a* 4·3, *b* 4·4, *c* 3·7, J 83, K 75.

10. 89. Guanche. ♀, æt. c. 40. Calv.
A 80, B 20·4, C 14·7, *a* 4·8, *b* 5, *c* 4·9, D 15·2, E 7·1, F 5·7*p*, *a* 4·7,
b 5·2, *c* 4, G 5·4, *a* 4·7, *b* 4·9, *c* 4·2, I 5, J 80, K 76.

11. 90. Guanche. ♀, æt. c. 40. Calv.
A 64, B 18·8, C 13·5, *a* 4·5, *b* 4·7, *c* 4·2, D 13·3, E 6·5, F 5·2*p*, *a* 4·3,
b 4·8, *c* 4·1, G 4·9, *a* 4·1, *b* 4·4, *c* 4, I 4·5, J 80, K 75.

12. 91. Guanche. ♀, young. Calv.
A 69, B 19·6, C 14·2, *a* 4·7, *b* 5·1, *c* 4·4, D 13·7, E 6·8, F 5·4*p*, *a* 4·6,
b 5·1, *c* 4·1, G 5·1, *a* 4·3, *b* 4·5, *c* 3·7, J 79, K 75.

Has a frontal suture; the left canine is presenting its apex horizontally through the front of the superior maxillary.

13. 92. Guanche. ♀, of middle age. Calv.
A 69, B 19·2, C 13·9, *a* 4·7, *b* 5, *c* 4·2, D 13·7, E 6·7, F 5·2*p*, *a* 4·4,
b 4·8, *c* 3·9, G 5·1, *a* 4·4, *b* 4·7, *c* 3·9, I 4·6, J 77, K 75.

The alveolar processes are almost entirely removed; but the right canine is presenting its tip through the facial surface of the upper maxilla.

This series of Guanche calvaria was found in the *Cueva de Guerra*, Teneriffe, and, being almost all those of females, gives rise to the query whether they may not have been deposited in separate sepulchral caves from the men.

14. 138. Guanche. ♂, æt. c. 18. Imperf. calv.
C 15·2, *a* 4·9, *b* 5·5, *c* 4·8, E 7·6, F 5·2*p*, *a* 4·9, *b* 4·7, *c* 4·4, G 5·3,
J 68, K 69.

A remarkably long, fine calvarium, which appears to be that of a young man.

¹ *Sur les Déformations plastiques du Crâne*, par M. le Dr. Joseph Barnard DAVIS, Mém. de la Soc. d'Anthrop. i. 379.

15. 139. Guanche. ♀, æt. e. 70. Calv.

A55, B19·3, C13·9, *a*4·7, *b*5, *c*4·2, D13·4, E6·8, F5·4*t*, *a*4·3, *b*4·9, *c*4, G4·2, *a*4·2, *b*4·3, *c*3·8, I4·8, J·79, K·61.

This calvarium of an aged woman is affected with *plastic* deformation, the result of the atrophy of age, and is the subject of the memoir above quoted (*Sur les Déformations plastiques du Crâne*). See Plate II. fig. 2.

16. 140. Guanche. ♀, æt. e. 40.

A69, B19·9, C14, *a*4·8, *b*4·7, *c*4·5, D14, E7·1, F5·4*t*, *a*4·5, *b*5·2, *c*4·2, G5·2, *a*4·4, *b*4·5, *c*4·2, H4·4, I4·7, J·76, K·73.

17. 141. Guanche. ♂, æt. e. 60.

B20·6, C14·9, *a*5, *b*4·5, *c*5·4, D14, E7·2, F5·4*p*, *a*4·2, *b*4·9, *c*4·3, G5·3, *a*4·4, *b*4·6, *c*4·3, H4·5, J·75, K·73.

With a narrow face and long aquiline nose, is very European in its look, but many of the teeth are worn to the fangs. Has slight indications of disease of the outer table of the frontal and left parietal, with thickening of the former in one spot. The cheek-depressions of the superior maxillaries are exceedingly deep, and enervated greatly on the *antra*.

18. 142. Guanche. ♀, æt. e. 35.

A65, B19·3, C13·5, *a*4·5, *b*4·3, *c*3·7, D13·5, E6·7, F5·2*p*, *a*4·5, *b*4·8, *c*3·8, G5·1, *a*4·2, *b*4·3, *c*4, H4·2, I4·6, J·77, K·76.

A small ovoid skull of beautiful proportions, with a fine aquiline nose. Has a frontal suture and a trapezoidal *os incæ*, which is divided by a suture in the median line. It is the fig. 12 of JACQUART'S plate. Teeth seriously worn.

19. 143. Guanche. ♀, æt. e. 4. Entirely non-African.

20. 144. Guanche. ♂, æt. e. 60.

A78, B20·2, C14·6, *a*5·1, *b*5, *c*4·5, D14·8, E7·1, F5·6*p*, *a*4·7, *b*4·7, *c*4·4, G5·5, *a*4·7, *b*4·7, *c*4·2, H4·6, I5·3, J·78, K·77.

Has indications of an old injury about the junction of the sagittal and the lambdoid sutures. The sutures are greatly effaced.

21. 146. Guanche. ♀, of uncertain age. Calv.

A70, B19·8, C14·2, *a*4·8, *b*5, *c*4·4, D14·2, E6·9, F5·5*p*, *a*4·5, *b*5·1, *c*3·9, G5, *a*4·2, *b*4·5, *c*4, I4·9, J·79, K·72.

Has a frontal suture and all the other sutures open; still the alveoli are entirely absorbed.

22. 147. Guanche. ♂, æt. c. 70.

A68, B19·9, C14·4, *a*5·1, *b*4·8, *c*4·5, D14·2, E7·1, F5·2*p*, *a*4·4, *b*4·6, *c*4·3, G5·3, *a*4·5, *b*4·6, *c*4·2, H4·4, I4·8, J·73, K·74.

Coronal, sagittal, and lambdoid sutures wholly ossified.

23. 149. Guanche. ♀, of mature age. Imperf. ealv.

A63, B19·4, C13·5, *a*4·5, *b*4·5, *c*4·2, D13·2, E6·7, F5·2*p*, *a*4·3, *b*4·8, *c*4·2, G4·9, *a*4·1, *b*4·3, *c*3·7, J·77, K·73.

24. 150. Guanche. ♀, of advanced age. Calv.

A69, B19·6, C13·7, *a*5, *b*4·6, *c*4·1, D14, E6·7, F5·5*p*, *a*4·5, *b*5·2, *c*4·2, G5·1, *a*4·5, *b*4·5, *c*3·8, I5, J·82, K·76.

The alveoli and superior maxillaries are absorbed to the level of the malar bones.

25. 151. Guanche. ♀, æt. c. 65.

A68, B19·8, C14·1, *a*4·6, *b*4·9, *c*4·6, D13·7, E7, F5·2*p*, *a*4·3, *b*4·7, *c*4·2, G5, *a*4·2, *b*4·4, *c*4·3, H4·3, I4·9, J·74, K·71.

Has the sear of a serious injury on the frontal.

26. 152. Guanche. ♀, æt. c. 40.

A82, B20·9, C14·7, *a*5, *b*4·9, *c*4·8, D14·3, E7·4, F5·6*p*, *a*4·7, *b*5·4, *c*4·4, G5·3, *a*4·5, *b*4·7, *c*4·4, H4·2, I5, J·75, K·71.

27. 153. Guanche. Tibia and fibula of right leg, which have both been fractured, the latter in two places, and are reunited, with much displacement.

Nos. 138 to 152 were discovered in a cave at the *Puerto de la Madera*, near Taeoronte, Teneriffe, in 1853.

This entire series of Guanche skulls was presented by Mr. Wm. DAVIDSON, Teneriffe.

It is now said that no more Guanche erania will be obtained, as all the caves have been explored.

Average Measurements of Guanche Skulls.

♂, 5 erania of Guanche men. A73, B20·2, C14·6, *a*4·9, *b*4·8, *c*4·7, D14·4, E7·2, F5·3, *a*4·5, *b*4·7, *c*4·3, G5·3, *a*4·5, *b*4·6, *c*4·2, H4·5, I5·1, J·73, K·73.

♀, 17 erania of Guanche women. A69·9, B19·7, C14·1, *a*4·8, *b*4·8, *c*4·4, D13·9, E6·9, F5·3, *a*4·5, *b*4·9, *c*4·1, G5·1, *a*4·3, *b*4·5, *c*4, H4·4, I4·8, J·77, K·73.

Extremes, A63–82, J·74–83, K·61–76.

Three are brachycephalie. The breadth exceeds the height in all, with but one exception.

♂, ♀, of 22 skulls of Guanches (men and women). A71·4, B19·9, C14·3, *a*4·8, *b*4·8, *c*4·5, D14·1, E7, F5·3, *a*4·5, *b*4·8, *c*4·2, G5·2, *a*4·4, *b*4·5, *c*4·1, H4·4, I4·9, J·75, K·74.

It may be worth remarking that the skulls here described, commencing with those of the ancient Egyptians, including the Arabs of north Africa, the Moors of Algeria, the Berbers, and

the Guanches, all agree in being small. The average internal capacity of those of the men is 73 oz., of those of the women 69·9, and of those of both sexes 71·1. They also belong to the ovoid division of skulls, that which is the common form among Europeans. In truth, they are very like the smaller crania of Europeans, and they do not present the characteristic forms usually associated with the races of Africa—forms which are most distinctly marked in certain races of the west coast. Four or five exhibit depressions, the result of injuries during life. They are all thin in their walls, or only moderately thick; they are tolerably orthognathous; their nasal bones are not flat and lying on the same plane, but are prominent; the anterior nasal aperture is not large and wide, with its angles rounded off, but is of the European form; their foreheads are not sloping, but moderately upright; the calvarium is not elongated and laterally compressed; and the zygomatic arches do not stand out in any unusual degree. From all these marks it is apparent that the whole series of skulls is non-African, and would be classified in BLUMENBACH'S Caucasian division. Notwithstanding, the Guanche cranium has a certain typical physiognomy, which distinguishes it from all others.

Hence the great ethnological doctrine established by the persevering labours of MORTON, that the ancient Egyptians (if they must be classed at all according to the fashion of systematists) were of the Caucasian and not of the Æthiopian race (although he at last justly looked upon them as aboriginal and indigenous), must be extended so as to embrace many peoples of northern Africa, *i. e.* supposing this systematic distribution to be of any particular value. Besides the ancient Egyptians peculiar to the continent, there must be included in the same Caucasian class other primitive races, particularly the Berbers and the Guanches. MORTON'S conclusion was not based upon cranial configuration solely, but his researches embraced other physical peculiarities. In the instance of the mummy of a Guanche woman in the Library of Trinity College, Cambridge, the hair is copious, curly, frizzed out rather than flowing, of good length, but crisp and very dark. It bears no resemblance to the woolly hair of Negroes.

Baron AL. HUMBOLDT tells us, "The Guanches, famed for their tall stature, were the Patagonians of the Old World" (*Personal Narrative*, i. 278). The eminent Prof. Antonio GARBIGLIETTI, of Turin, drew attention to this strange opinion, and showed, from the materials for an accurate judgment in his hands, that the Guanches did not materially differ in stature from other races (NICOLUCCI, *Razze Umane*, 1857, i. 295). But the statement of HUMBOLDT is singularly at variance with the truth. The Cambridge mummy fully supports the opposite and just conclusion of the late Dr. HOBKIN, that the Guanches were a race of small

stature. Its height is 4 ft. 10 in., which agrees with Dr. HODGKIN's observations. He tells us the mummy of the man in the College of Surgeons Museum is 4 ft. 10 in., that in the Jardin des Plantes 4 ft. 10·6 in., and that of the woman in this last collection only 4 ft. 7 in. Mr. PETTIGREW says his "female Guanche measures 4 ft. 11 in." A tibia and fibula in my collection (No. 153), which have both been broken and are reunited with shortening, show that the tibia would measure, the shortening being allowed for, between 12 and 13 inches. They are probably the leg-bones of a man. The tibiæ of 26 male and female skeletons of Ancient Romans, or Romano-Britons, found in the White Horse Hill cemetery, varied in measure from between 11 and 12 inches to between 15 and 16 inches (*Cran. Brit. Descr. pl. 51. p. (3)*). A femur of a Guanche man was found by Dr. A. SASSE, of Zaandam, to be 17·3 in. long, which would make his stature to have been about 5 feet. The difficulty of accounting for the presence of such a peculiar race as the Guanches in the island of Teneriffe, for "the satisfactory solution of which Dr. HODGKIN sees no clue," and which leads him to an appeal to fancy and plausible conjectures, need no longer perplex, if it be allowed that the Guanches were a race *sui generis*, pre-eminently non-Negroid. I do not know of any facts which contradict such an admission¹.

References.—BLUMENBACH, *Dec. Cran. Tab. xlii.*, in which is given the figure of the prepared head of his Guanche mummy of a woman. G. SANDIFORT, *Tab. Cran.*, "Cran. Ineol. ins. Tenerif. Guanche dieti." P. Barker WEBB and Sabin BERTHELOT, *Hist. Nat. des îles Canaries*, 1842, fol., Tome i. prem. partic. Pl. 2 gives faithful figures of Guanche skulls, and also portraits of the extant natives of the islands, many of whom are said to show characteristic traits of their descent from the Guanches. The volume likewise contains an account of the method of embalming employed by the Guanches of Teneriffe; for there is no proof of embalming having been adopted by the inhabitants of the other islands. The preliminary process was the same as that used by the Egyptian embalmers, viz. the application of brine, of which I have had abundant evidence in these crania. BERTHELOT, *Mém. de la Soc. Ethnol.* i. 129, ii. 77. Dr. T. HODGKIN, *On the Anc. Inhabitants of the Can. Isls.*, Journ. Ethnol. Soc. i. 1848, p. 167. PETTIGREW's *Hist. of Egyptian Mummies*, 1834, 4to, Chap. xvii. p. 231. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 26. RETZIUS, *Ethnol. Schriften*, 1864, Taf. i. fig. vi.

The ineisor teeth of this collection of Guanche crania, which are so generally deficient, are sufficient to refute the notion of

¹ It is singular that Mr. C. Carter BLAKE, long after this was written, should have applied the same expression (*sui generis*) to Guanche skulls (*Anthropological Review*, 1864, ii. p. ccxxxiii).

BLUMENBACH, that there was anything peculiar in their crowns beyond the special detrition to which they have been subjected. He supposed that they resembled in this respect the incisors of the ancient Egyptians, in whom he considered he had detected a certain peculiarity. Speaking of the *coronae dentium*, he says, "neutiquam scalpriformes ad demordendum aptae, verum obtusae, fere cylindricae, extima superficiei plana detrita."

D. RACES OF THE GAMBIA.

1299. Jolloff, or Yolloff. ♂, æt. c. 25.

A75·5, B20·3, C14·5, a4·9, b5·2, c4·4, D14·4, E7·3, F5·1p, a4·3, b4·7, c4, G5·6, a4·6, b4·7, c4·2, H5·1, I5·2, J·69, K·76.

In the fangs of both upper *outer* incisors there is a depression running down each of their sides, a tendency to dichotomy. The spheno-parietal sutures are short; the nasal bones are not very flat, nor depressed; the lachrymal canals are large; the large *ossa unguis* each having an elevated dissepiment or crest running down its middle. A fine dolichocephalic prognathic Negro skull, with some peculiarities.

The Jolloffs are a fine race, and are engaged in all the mechanical arts. The men wear European clothing; the women, who are well-made and industrious, wear the *Pagn*, or country cloth, round the loins, decorating themselves with solid gold and silver ornaments.

1300. Fullah, or Foulah. ♂, æt. c. 35.

A70, B20·6, C15·1, a5·5, b5·3, c4·3, D14·3, E7·5, F5·2p, a4·5, b4·8, c4, G5·3, a4·6, b4·7, c4·1, H5, I5·1, J·69, K·70.

This is a heavy, partially hyperostotic skull. The sagittal suture is wholly ossified and obliterated, the coronal and sphenoidal mostly so. There is elongation of the calvarium, with great thickening about the occipital protuberance, no scaphocephalism, but slight klinocephalism. Has a small exostosis from the anterior extremity of each occipital condyle, an approach to what has been designated *condylus tertius*.

The Fullahs, a pastoral tribe, termed the Gipsies of Africa, are shepherds and bullock-keepers, and are generally handsome and of a lighter colour than the other African tribes.

1. 1301. Mandingoe. ♂, æt. c. 55. *Marabout*. Calv.

A76, B19·9, C14·5, a4·8, b5·4, c4·3, D14·4, E6·9, F5·4p, a4·4, b4·5, c4·1, G5·5, a4·5, b4·8, c4, J·78, K·79.

This calvarium (for the lower jaw attached does not belong to it) has a very feminine aspect.

2. 1302. Mandingoe. ♀, æt. c. 35. *Sonninkee*. Calv.

A55, B18·4, C13·7, a4·8, b4·7, c4·2, D13·6, E6·5, F5·1_p, a4·1, b4·8, c4·1, G5·2, a4·4, b4·5, c3·6, I4·7, J·78, K·80.

The Mandingoes, who mostly inhabit the coast-line, are black, generally tall and well-made, and stately in their carriage. They are divided into *Marabouts* and *Sonninkees*,—the former being followers of Mahomet, abstaining from intoxicating drinks and regular in their habits, and possessing large schools in some towns, where Arabic and the Koran are taught; the latter are drunkards. There is constant war between the two sects.

1303. Serryia, or Sierrawoolle. ♂, æt. c. 40.

A75·5, B20·3, C14·5, a4·8, b5·2, c4·5, D14·4, E7·3, F5·2_p, a4·6, b5, c4·2, G5·4, a4·6, b4·7, c4, H4·3, I5·3, J·71, K·74.

The Serryias inhabit the coast to the north of the Gambia. They are strong, active, and well built, brave and enduring, but have not the adaptivity of some other tribes; consequently they are labourers, and after sojourning in Bathurst, often return to their own country to cultivate their farms, agriculture being the favourite occupation of the Gambia tribes.

Nos. 1299 to 1303 presented by W. H. SHERWOOD, M.D., who kindly communicated the above notes on these tribes.

References.—RAFFENEL's *Voyages* contain some good illustrations of the Gambia Tribes:—"Yoloff du pays de Wallo," *Voy. dans l'Afrique Occidentale en 1843 et 1844*, Atlas, pl. 1. fig. 2, "Femme Foulah du Cantorah," pl. 11. fig. 2; *Nouveau Voy. dans le Pays des Nègres*, 1846, "Types Foulahs," T. ii. p. 305; "Mandingue de Bambouk," *Voy. de 1843-44*, pl. 8. fig. 1, "Mandingue de Woolli," pl. 11. fig. 1.

E. AFRICAN NEGROES WHOSE PLACE OF ORIGIN AND TRIBE ARE NOT KNOWN.

1. 21. African Negro. ♂, æt. c. 45.

A72, B20·5, C14·5, a5·2, b4·9, c4·4, D15, E7·2, F5·4_t, a4·8, b4·4, c4·3, G5·5, a4·5, b4·8, c4·1, H5·1, I5·4, J·75, K·76.

Presents great complexity of serrations in the middle of each half of the coronal suture.

2. 100. African Negro. ♀, æt. c. 30.

A72, B20·2, C15·2, a4·8, b5·6, c4·8, D13·3, E7·3, F5·3_p, a4·5, b4·4, c4·1, G5·2, a4·4, b4·5, c4·1, H4·8, I4·9, J·72, K·71.

Presents complete obliteration of the sagittal suture, but

no *scaphocephalism* or other deformity. The alisphenoids and parietals only just touch.

3. 101. African Negro. ♀, æt. c. 30.

A59·5, B18·3, C13, *a*4·8, *b*4·2, *c*4, D13·7, E6·4, F5*p*, *a*4, *b*4·6, *c*4, G5, *a*4·5, *b*4·6, *c*3·9, H4·3, I4·9, J·78, K·78.

This is a case of asymmetrical plastic deformation, which affects the occipital on the right side of the *foramen magnum* and the right condyloid process, so as to appear to depress both considerably. The *foramen magnum* is irregularly deformed and oblique.

4. 154. African Negro. ♂, æt. c. 35.

A69, B20, C15, *a*5·2, *b*5·3, *c*4·5, D14·7, E7·2, F5·1*t*, *a*4·5, *b*4·9, *c*4·1, G5·6, *a*4·9, *b*4·9, *c*4·2, H4·7, I5·2, J·70, K·78.

This very fine and ponderous cranium of an African, weighing 39·5 oz., has a supernumerary toothlet among the molar series of the upper jaw. It is *cylindrical* in form, has one cusp, and is situated in an alveolus, outside and between *m.* 2 and *m.* 3 on the left side¹.

The jaws are wide, massive, and prognathous; the nasals broad, flat, almost on a level with the nasal processes of the superior maxillaries, and short; the forehead upright, but narrow; and the calvarium dolichocephalic and narrow. On the whole it is a strongly marked specimen; and I believe it to be from a tribe of the *Mozambique* coast.

It is the skull of a Brazilian slave, and was presented by Dr. Jon. ABBOT, Bahia.

5. 259. African Negro? ♀, æt. c. 30. Calv.

A75, B20·7, C15·4, *a*5·5, *b*5·5, *c*4·4, D14·7, E7·7, F5*p*, *a*4·3, *b*4·7, *c*4, G5·4, *a*4·8, *b*5, *c*4·3, I4·8, J·65, K·70.

A remarkably dolichocephalic, narrow calvarium of a young woman, found in the Turkish cemetery at Scutari. I believe it is the relic of a Negress. Has a ridge running along the middle of the frontal bone and the fore part of the sagittal suture.

6. 401. African Negro. ♂, æt. probably 70 or more.

A66, B20·2, C14·3, *a*5·1, *b*5, *c*4·2, D14·3, E7·2, F5·3*t*, *a*4·5, *b*5, *c*4·1, G5·4, *a*4·6, *b*4·7, *c*4·1, H4·5, I5, J·73, K·75.

Presents marks of united fracture across the nasal bones, and caries of the palate from syphilis.

According to his own account, this man was a native African, and brought from the Cape to Ceylon in the service of the Dutch

¹ OWEN'S *Odontography*, i. 455. In the Giessen Anatomical Museum, which contains SÖMMERRING'S Collection, is the calvarium of a Negro that has six molar teeth on both sides (*Cat. Mus. Anat. quod coll.* S. T. de SOEMMERRING, 1830, p. 121).

Government. But the Dutch occupation of the island terminated in 1796. He died in the Pettah Hospital, Colombo, 1857.

Prepared by Mr. C. A. KRIEKENBECK, and presented by Mr. C. P. LAYARD.

Reference.—G. BAKKER, *Oorspronkelijken Stam*, pl. i. fig. 3, pl. ii. fig. 8.

7. 855. African Negro. "BLACK POLL." ♀, æt. e. 45. D.C. A73, B19·8, C14·3, a 5, b 4·8, c 4·5, D14·5, E 6·9, F 5·4p, a 4·5, b 5, c 4·5, G 5·4, a 4·6, b 4·7, c 4·3, H 4·1, I 5·3, J·78, K·78.

"A Courtezan of London: from Mr. BEST, Tavistock Street, Covent Garden."—*Cat.* A heavy skull.

8. 875. African Negro. Nubian? ♂, æt. e. 60. D.C. A79, B 21, C14·9, a 5·1, b 5·2, c 4·6, D15·5, E 7·2, F 5·8p, a 4·8, b 5·4, c 4·5, G 5·5, a 4·6, b 5, c 4·5, H 5·1, I 5·2, J·80, K·76.

DEVILLE purchased this fine and very heavy skull, weighing 42 ounces, for £4, of DUPONT of Paris, and described it in his *Catalogue* as "A Mameluke servant of Prince ROUSTAM. Came from Egypt with NAPOLEON and died at Paris, 1826." It appears subsequently to have been taken by Dr. J. P. BROWNE (who had the charge of DEVILLE's Museum) for the cranium of ROUSTAM himself, NAPOLEON's Mameluke. But ROUSTAM was a Georgian, born at Tiflis¹, gained some property in France, died Dec. 7, 1845, and was buried at Dourdan². This, no doubt, is the skull of a slave of ROUSTAM's. It is brachycephalic; still I believe him to have been a Nubian, i. e. of Negroid race.

The temporal extremities of the coronal suture are entirely obliterated.

9. 1342. Mameluke. Nubian? ♂, æt. e. 35. V.L. d. J. A80, B 20·3, C15·1, a 5·3, b 5·3, c 4·5, D15·2, E 7, F 5·5p, a 4·7, b 5·2, c 4·2, G 5·6, a 4·9, b 5, c 4·2, H 4·5, I 5, J·78, K·80.

The lateral portions of the coronal suture and the posterior of the sagittal are ossified. Very prognathous.

This man was a soldier, and was killed in the war, between the Russians and Turks, previous to the Crimean war. He was designated a Mameluke, a term comprehending many races. The fine skull is evidently Negroid, and is probably that of a Nubian.

Reference.—LUCÆ, *Organisch. Formenl.* Taf. viii., Nubier (Sehangalla).

¹ The Mamelukes of Egypt were purchased slaves from the Caucasus, as in the case of ROUSTAM.

² For much information, by which I have been enabled to unravel this confusion, I am indebted to the politeness of Prof. J. GIRALDÈS, Prof. Paul BROCA, and Dr. J. P. BROWNE. There is a figure of ROUSTAM in DENON's *Egypt*, pl. 87.

10. 922. African Negro. ♂, æt. c. 35. D.C.
A 87, B 20·8, C 16·3, a 5·5, b 5·9, c 4·9, D 15·3, E 7·6, F 5·3t, a 4·6,
b 4·5, c 4·3, G 6; a 5, b 5·2, c 4·5, H 4·8, I 5·2, J·69, K·78.

From the collection of Joshua BROOKES, F.R.S.

11. 923. African Negro. ♀, æt. e. 30. D.C.
A 77, B 20·1, C 14·8, a 4·9, b 5·6, c 4·3, D 15·2, E 7·1, F 5·5p, a 4·6,
b 5·3, c 4·3, G 5·8, a 4·6, b 4·9, c 4·2, H 4·6, I 5, J·77, K·81.

The alisphenoids only just meet the parietals.

Nos. 922 and 923 from the collection of Joshua BROOKES, the former being inscribed in his autograph.

12. 1273. African Negro. *Cape Verd Islands*. ♂, æt. e. 50.
A 67·5, B 20, C 14, a 4·6, b 5·2, c 4·2, D 13·7, E 7·6, F 5·4t, a 4·6,
b 4·9, c 4·6, G 5·4, a 4·4, b 4·4, c 4, H 4·7, I 5·3, J·71, K·71.

The posterior portion of the sagittal and the lateral portions of the coronal sutures are totally effaced. The alisphenoids only just touch the parietals. The proportion of the height of the skull to its length is the same as that of the breadth of the skull, both being very low. Lowness, especially of the parietal region, has been said by excellent observers to be the characteristic of Tasmanian skulls, not of Australians. It may be questioned whether it is not common to African negroes also, although this example may be influenced by synostosis. It certainly does not appertain to what have been denominated Oceanic negroes, the inhabitants of New Caledonia and the surrounding islands.

This skull is labelled "Portuguese. Cape de Verd," but it is unmistakeably negro. Prof. G. BUSK has a negro skull from the Cape Verds (*Crania Typica*, pl. 3).

13. 1276. African Negro. ♂, æt. c. 60.
A 68, B 19·9, C 14·5, a 5·3, b 5·3, c 3·9, D 14·6, E 7·1, F 5·1p, a 4·4,
b 3·9, c 4, G 5·4, a 4·7, b 4·8, c 4·2, H 4·7, I 5·2, J·71, K·76.

14. 1277. African Negro. ♂, æt. c. 60. Calv.
A 67·5, B 19·6, C 14, a 4·6, b 5·4, c 4, D 14·2, E 7, F 5·2t, a 4·2,
b 4·2, c 4·1, G 5·2, a 4·4, b 4·6, c 4·3, I 5·4, J·74, K·74.

15. 1358. Negro. ♂, æt. c. 20. V.L.d.J.
A 67, B 20·4, C 14·5, a 5, b 5, c 4·5, D 13·5, E 7·3, F 5·3t, a 4·4,
b 4·5, c 4·3, G 5, a 4·4, b 4·5, c 4·1, H 3·9, I 4·5, J·72, K·68.

The sagittal suture is totally effaced prematurely; both parietal foramina exist; the parietal tubers are not indicated, yet there is no carina.

16. 1359. Negro. ♂, æt. c. 45. V.L.d.J.
A 74, B 20·9, C 14·7, a 5, b 5, c 4·7, D 14, E 7·2, F 5·5t, a 4·4,
b 4·5, c 4·4, G 5·4, a 4·3, b 4·6, c 4·2, H 5, I 5·5, J·76, K·75.

The skull of a slave of Surinam, who appears to have been

sent from Ceylon, where the Dutch formerly had possessions and negro slaves.

17. 1360. Negro. ♀, æt. e. 50. V.L. d. J.

A68, B18·7, C13·4, a4·5, b4·8, c4·1, D13·6, E6·3, F5·2_p, a4·3, b4·7, c3·9, G5·1, a4·3, b4·5, c3·8, H4, I5, J·82, K·80.

The right alisphenoid is entirely cut off from the parietal. The proportions render this a doubtful Negro.

18. 1361. Negro. ♂, æt. e. 35. V.L. d. J.

A66·5, B19·4, C14·1, a5, b4·8, c4·3, D13·9, E7, F5·1_p, a4·2, b4·7, c3·9, G5·2, a4·4, b4·5, c3·8, H4·6, I5·2, J·72, K·74.

Sent as a slave from Africa to Surinam, where he died.

19. 1363. Negro. ♂, æt. e. 30. V.L. d. J.

A73, B19·9, C14·6, a4·9, b5·1, c4·6, D14·2, E7·1, F5·3_p, a4·3, b4·5, c4·4, G5·5, a4·4, b4·6, c4·1, H4·7, I4·8, J·74, K·77.

Average Measurements of Skulls of African Negroes whose place of origin and tribe are not known.

♂, averages of the crania of 12 men. A72·4, B20·2, C14·6, a5, b5·2, c4·4, D14·5, E7·2, F5·3, a4·5, b4·6, c4·2, G5·4, a4·5, b4·7, c4·1, H4·7, I5·2, J·73, K·75.

Extremes, A66-87, J·69-80, K·71-81.

♀, averages of the crania of 5 women. A71·3, B19·8, C14·5, a5, b5·1, c4·4, D14·3, E7, F5·2, a4·4, b4·8, c4·2, G5·3, a4·6, b4·7, c4·1, H4·4, I5, J·74, K·75.

Extremes, A59·5-77, J·65-78, K·70-80.

Averages of 17 skulls of negroes and negresses. A71·3, B20, C14·5, a5, b5·1, c4·4, D14·4, E7·1, F5·2, a4·4, b4·7, c4·2, G5·3, a4·5, b4·7, c4·1, H4·5, I5·1, J·73, K·74.

References.—E. SANDIFORT, *Mus. Anat.* ii., "Cranium Aethiopsis." BLUMENBACH, *Dec. Cran.* Tab. vi., vii., viii., xvii., xix., xxx., lvi., "Mulattæ Demarari." M. J. WEBER, *Ur- und Racen-Formen*, Tab. xxi. PRIEHDARD, *Phys. Res.* ed. 4. i. fig. 3 (Philip BERNARD, Creole of Cuba), fig. 4. VIMONT, *Traité de Phrénologie*, pl. exiv. fig. 2. Gottfried SCHADOW, *National-Physiognomien*, Berlin, 1835, fol., pl. viii. I have not made many references to this work, which contains careful outlines of many skulls in the Berlin Museum, as it is a book on art and not anatomical. This Plate, which was executed in consequence of the Museum's having acquired, in 1833, thirteen heads of Negroes from Brazil, includes a head of a Cabinda Negro and the skull of a Cabinda Negress. They both present a deep notch in the edges of the

middle upper incisors—a tribal mark, which the author has overlooked. G. SANDIFORT, *Tab. Cran. div. Nat.*, “Cranium Aethiopsis, *Darfour*.” DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 42. fig. 1, 2, 5, 6 (*Makouas*). J. VAN DER HOEVEN, *Bijdragen tot de natuurlijke geschiedenis van den Negerstam*, Leiden, 1842, 4to, pl. ii. (*Makoea*). LUEAE, *Organisch. Formenlehre*, Taf. vii.

F. AFRICAN NEGROES OF KNOWN TRIBES.

a. *Fantees*.

1. 262. Fantee. ♂, æt. e. 35.

A67, B19·3, C14·4, *a* 5, *b* 4·8, *c* 4·6, D14·6, E6·9, F5·2*p*, *a* 4·6, *b* 4·8, *c* 3·7, G5·6, *a* 4·7, *b* 4·8, *c* 4, H4·1, I5·2, J·75, K·81.

Prognathous; nasal bones very small, internasal suture obliterated; a diamond-shaped interparietal bone; the upper canines and incisors have been “chipped” into points.

This Negro went from the Dutch settlement of George d’Elmina to Java, where he died.

Presented by Dr. Geerlaf WASSINK.

2. 898. Fantee. ♀, æt. e. 30. Calv.

D.C.

A63, B19·6, C14·2, *a* 4·8, *b* 5, *c* 4·4, D13·8, E6·9, F5·2*p*, *a* 4·4, *b* 4·4, *c* 4·1, G5·3, *a* 4·4, *b* 4·5, *c* 4, I4·9, J·75, K·76.

“From Lieut. HOLMAN,” *i. e.* the blind traveller.—*Cat.*

b. *Ashantees*.

1. 263. Ashantee. ♂, æt. e. 20.

A64, B19, C13·8, *a* 4·6, *b* 5·2, *c* 4, D13·9, E6·8, F5*p*, *a* 4·2, *b* 4·6, *c* 4, G5·4, *a* 4·4, *b* 4·6, *c* 4, H4·6, I4·7, J·73, K·79.

Like No. 262, a very small skull; yet both are most likely male. The alisphenoid does not reach the parietal on either side. The two upper middle incisors have been chipped on the inner side of their cutting-edges so as to produce a gap between them in the form of an inverted V (Λ).

Presented by Dr. G. WASSINK.

2. 324*. Ashantee. ♂. Soldier in the island of Java.

E7·1, F4·5*t*, J·63.

“Cranium eximium typi dolichoecephali prognathi exemplum.”—VAN DER HOEVEN, *Catalogus*, No. 136, p. 48.

Presented by Prof. J. VAN DER HOEVEN.

3. 858. Ashantee. ♀, æt. incert. Calv. D.C.

A76, B20·2, C14·8, *a* 5, *b* 5·2, *c* 4·6, D14·9, E7·1, F5·3*p*, *a* 4·6, *b* 4·9, *c* 4·4, G5·7, *a* 4·8, *b* 5, *c* 4·4, I5·1, J74, K80.

Presents a fronto-squamosal suture about half an inch in length on each side, the alisphenoids being entirely cut off from the parietals.

4. 896. Ashantee. ♂, æt. e. 40. Calv. D.C.

A68, B19·5, C14·1, *a* 4·6, *b* 5·4, *c* 4·1, E6·9, F5·1*p*, *a* 4·1, *b* 4·5, *c* 4·3, G5·3, *a* 4·7, *b* 4·8, *c* 4·1, J74, K76.

“Sent by Lieut. EVANS, of the Royal Marines, Jan. 4, 1828.”
—*Cat.*

5. 897. Ashantee. ♂, æt. e. 30. Calv. D.C.

A75·5, B20·1, C14·7, *a* 5·1, *b* 5·5, *c* 4·1, D15, E7·2, F5·1*p*, *a* 4·6, *b* 4·6, *c* 4, G5·7, *a* 4·8, *b* 5, *c* 4·1, I5·1, J70, K79.

The centre of the frontal is affected with earies, which has penetrated both tables.

“Sent by Lieut. HOLMAN, the Blind Traveller, in 1828.”—*Cat.*

6. 1362. Ashantee? *Bonsoo Tribe*. ♂, æt. e. 35. V.L. d. J.

A72, B19·8, C14·3, *a* 4·8, *b* 4·9, *c* 4·6, D14·9, E6·6, F5·6*p*, *a* 4·5, *b* 5·2, *c* 4·1, G5·4, *a* 4·6, *b* 4·8, *c* 4·1, H4·8, I5·2, J84, K81.

Has a triquetral bone in each of the spheno-parietal sutures. The upper front teeth have been slightly grooved. Although particularly described in VAN LIDTH DE JEUDE's MS. Catalogue as an Ashantee Negro, of the Bonsoo Tribe, I have no doubt it is the skull of a Javan, or other islander of the Oriental Archipelago. Like the famous “*one grandchild of the pure white fantail and pure black barb, of as beautiful a blue colour, with the white rump, double black wing-bar, and barred and white-edged tail-feathers, as any wild rock-pigeon*” (*Origin of Species*, 1860, p. 25), of DARWIN, this skull would prove a dangerous element on which to base a hypothesis.

Average measurements of three skulls of Ashantee men. A69·1, B19·5, C14·2, *a* 4·7, *b* 5·3, *c* 4, D14·4, E6·9, F5, *a* 4·3, *b* 4·5, *c* 4·1, G5·4, *a* 4·6, *b* 4·7, *c* 4, H4, I4·9, J72, K78.

e. *Dahomans*.

1. 1226. Dahoman. ♂, æt. e. 22. Calv.

A75, B19·8, C14·5, *a* 5·1, *b* 5·1, *c* 4·3, D15, E7·1, F5·2*p*, *a* 4·5, *b* 4·9, *c* 4·2, G5·6, *a* 4·7, *b* 5·1, *c* 4·4, I5·2, J73, K79.

The spheno-basillary suture is open. Presents that complexity of serrations at the outer ends of the coronal suture, before they reach the temporal regions, which is so common in African skulls. At the same time, it exhibits a singular anomaly in

having a canal ascending through the middle of the squamous plate of the left temporal, for the transmission of a branch of the meningeal artery of the internal maxillary, which has ramified on the upper part of the scaly plate and the lower part of the parietal, where grooves mark the passage of the *ramusculi*. From the outer orifice of this canal a *suture* extends in an irregular course into the squamo-parietal suture. This latter conformation gives support to the view taken by Prof. WELCKER, when investigating the doctrine of VON BAER, of a uniparietal bone in true *scaphocephali*—that the existence of the parietal foramina is conclusive evidence of a sagittal suture at an early period of life—in fact, that a suture is an essential precursor to such foramina (*Wachsthum u. Bau*, S. 117).

Has a frightful sword-cut on the left side, which has passed through the zygoma, breaking above half an inch of it away, and cut through the muscles into the superior maxillary just before the last molar, and into the sphenoid, the temporal, and the parietal bones.

2. 1227. Dahoman. ♂, æt. e. 25. Calv.

A81, B21·5, C15·6, a5·8, b5·1, c4·7, D15·8, E7·8, F5·4p, a4·6, b5·2, c4·1, G5·6, a5, b5·1, c4·5, I5·6, J·69, K·71.

On the left side, the alisphenoid does not reach the parietal.

This large dolichocephalic calvarium has a sword-cut across the nasals and a bullet-wound, which has penetrated the left parietal near the middle.

3. 1228. Dahoman. ♂, æt. e. 30. Calv.

A81, B21, C15·2, a5·2, b5, c5, D15·3, E7·4, F5·4p, a4·7, b5, c4·1, G5·9, a5, b5·1, c4·5, I5·4, J·73, K·79.

This fine tall calvarium possesses a supernumerary molar on the left side. The last three true molars, one of which is supernumerary, have been cut and in use for a good while; the fourth smaller, the wisdom-tooth, is rising and has pierced the gum in its usual situation, but a little to the outside of the alveolus. There is a depression from former injury or caries on the fore part of the left external orbital process of the frontal. Has received a severe sword-cut nearly perpendicularly on the occipital. It has divided a large triangular epaetal bone and split the occipital downwards into the foramen.

4. 1229. Dahoman. ♂, æt. e. 30. Calv.

A80, B21, C15·2, a5·2, b5·2, c4·8, D15·1, E7·7, F5·3t, a4·3, b4·7, c4·2, G5·9, a5, b5·1, c4·4, I5·5, J·68, K·76.

This is a synostotic, dolichocephalic calvarium, there being no trace of the sagittal suture; the other sutures are all open. There is no deformation, save in length. Has had a very large frontal sinus on the left side, which has been especially

obnoxious to injury. Has received a severe sword-cut, which has carried away the left malar bone, a large portion of the frontal, reaching to the mesial line, exposing the whole of the cavity of the frontal sinus and a portion of the maxillary also, so as to expose the *antrum*. The cavity of the exposed frontal sinus is very large, as the septum above the nose is much inclined to the right side. It is nearly two inches in transverse diameter, extending quite across the orbit, and an inch and a half in height.

5. 1230. Dahoman. ♂, æt. e. 25. Calv.

A66, B20·3, C14·1, a4·7, b5, c4·4, D14·7, E7·1, F5·3t, a4·5, b4·7, c4·3, G5·3, a4·5, b4·8, c4, I5·2, J·74, K·74.

Has a trapezoidal interparietal bone. The left middle incisor has had its inner point chipped off, showing the same interference of art, or tribal mark, as in the Ashantee (No. 263). Both nasal bones have been cut away, and a bullet has penetrated both tables of the frontal bone, near the centre of the forehead.

6. 1231. Dahoman. ♂, æt. e. 30. Calv.

A68, B20·3, C14·7, a4·8, b5·2, c4·7, D14·3, E7·4, F5·2t, a4·4, b4·9, c4, G5·3, a4·5, b4·6, c4, I5·6, J·64, K·65.

Has a trapezoidal interparietal bone. Has received a severe sword-cut on the left side of the face, which has cut away the malar bone, exposed the whole of the *antrum*, and divided the alveoli down to the middle incisor.

7. 1232. Dahoman. ♂, æt. e. 70. Calv.

A75, B20·2, C14·8, a5, b5·2, c4·6, D15, E7·3, F5·1t, a4·3, b4·5, c4·1, G5·7, a4·7, b5, c4·3, I5·3, J·70, K·77.

In this old man's calvarium senile atrophy is manifested in the parietal bones. There are no marks of injury. He seems to have been out of his place on a battle-field.

8. 1233. Dahoman. ♂, æt. e. 35. Calv.

A75, B21, C15·7, a5·4, b5·9, c4·4, D14·9, E7·7, F5·2p, a4·5, b4·9, c3·9, G5·7, a4·7, b4·9, c4·2, I5·2, J·67, K·74.

This very dolichocephalic calvarium has received a bullet-wound through the middle of the right parietal, and another, not penetrating, on the frontal, and a sword-cut across the fore part of the superior maxillaries, which has no doubt taken the nose off.

9. 1234. Dahoman. ♀, æt. e. 30. Calv.

A68, B19·7, C14·2, a5·1, b5·4, c3·7, D13·9, E7·1, F5t, a4·4, b4·3, c3·9, G5, a4·6, b4·6, c3·9, J·70, K·70.

There is a complete ossification of the sagittal suture, still no scaphocephalism. Has received a sword-cut, which has carried away the right malar bone, the zygomatic arch, and a portion of the maxillary, so as to lay the whole of the *antrum* open.

10. 1235. Dahoman. ♀, æt. c. 30. Calv.
A70, B19·9, C14·1, *a* 4·8, *b* 4·7, *c* 4·6, D14·3, E7, F5·3*t*, *a* 4·8,
b 4·9, *c* 4·4, G5·3, *a* 4·6, *b* 4·7, *c* 4·1, I5·3, J·75, K·75.

Has received a sword-cut on the left external orbital process of the frontal, which has passed deep into the orbit, destroying the eye.

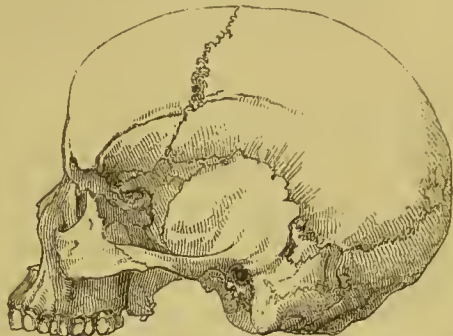


Fig. 76.—*Calvarium of a Dahoman Woman. An "Amazon."*—No. 1235.
—Quarter-size.

11. 1236. Dahoman. ♀, æt. c. 35. Calv.
A77, B19·9, C14·6, *a* 5·2, *b* 4·8, *c* 4·6, D14·6, E7, F5·3*p*, *a* 4·6,
b 4·9, *c* 4, G5·5, *a* 4·7, *b* 4·8, *c* 4·1, I5·2, J·75, K·78.

Has a triquetral bone in each sphenoparietal suture, or fontanel bone of the *fonticuli sphenoidales*. Has been injured on the nasal bones.

12. 1237. Dahoman. ♂, æt. e. 35. Calv.
A80, B21, C15, *a* 5·2, *b* 5·5, *c* 4·3, D14·4, E7·6, F5·6*p*, *a* 4·7,
b 5·5, *c* 4·1, G5·3, *a* 4·6, *b* 4·8, *c* 4·3, I5·1, J·73, K·69.

Has received a severe sword-cut across the left side of the occipital.

These 12 Dahoman calvaria are derived from the battle-field, under the walls of Abeokuta, where the King of Dahomey's army was defeated, March 15, 1864.

The three of women (Nos. 1234 to 1236) are relics of the king's famous AMAZONS, or female soldiers, who have died in battle.

Not improbably some of the frightful injuries observed may have been inflicted on fallen enemies,—the pets of the abolitionists being quite equal to this depth of barbarity.

Nos. 1226 to 1237 presented by Mr. R. Bruce N. WALKER, F.R.G.S.

Average Measurements of Dahoman Skulls.

♂, averages of 9 skulls of men. A75·1, B20·6, C14·9, *a* 5·1,
b 5·2, *c* 4·5, D14·9, E7·4, F5·3, *a* 4·5, *b* 4·9, *c* 4·5, G5·5,
a 4·7, *b* 4·9, *c* 4·2, I5·3, J·71, K·74.

Extremes, A66–81, J·64–74, K·65–79.

♀, averages of 3 skulls of women. A 71, B 19·8, C 14·3, *a* 5, *b* 4·9, *c* 4·3, D 14·2, E 7, F 5·2, *a* 4·6, *b* 4·7, *c* 4·1, G 5·2, *a* 4·6, *b* 4·7, *c* 4, I 5·2, J 7·4, K 7·4.

Extremes, A 68–77, J 70–75, K 70–78.

Averages of 12 skulls of Dahomans, ♂ and ♀. A 73, B 20·2, C 14·6, *a* 5, *b* 5, *c* 4·4, D 14·5, E 7·2, F 5·2, *a* 4·5, *b* 4·8, *c* 4·3, G 5·3, *a* 4·6, *b* 4·8, *c* 4·1, I 5·2, J 7·2, K 7·3.

All the 12 skulls are dolichoecephalie.

d. Yorubans.

1. 1127. Yoruban. ♀, æt. e. 40. Calv.

A 74·5, B 20·2, C 14·5, *a* 4·7, *b* 5, *c* 4·8, D 14·3, E 7·1, F 5·4*t*, *a* 4·5, *b* 4·8, *c* 4·3, G 5·4, *a* 4·4, *b* 4·6, *c* 4·4, I 5·2, J 7·6, K 7·6.

2. 1128. Yoruban. ♀, æt. e. 35. Calv.

A 73, B 19·9, C 14·5, *a* 5, *b* 5, *c* 4·5, D 13·7, E 7·3, F 4·8*t*, *a* 4·1, *b* 4·4, *c* 4·2, G 5·5, *a* 4·7, *b* 4·7, *c* 4·1, I 5·2, J 6·5, K 7·3.

A slightly scaphocephalic calvarium from premature synostosis of parietals, the sagittal suture being entirely obliterated, but no other suture.

3. 1129. Yoruban. ♀, æt. e. 22. Calv.

A 74·5, B 20·2, C 15·2, *a* 5·1, *b* 5, *c* 5·1, D 14·6, E 7·3, F 5·3*p*, *a* 4·2, *b* 4·8, *c* 3·9, G 5·6, *a* 4·8, *b* 5, *c* 4·4, I 4·9, J 7·2, K 7·6.

The nasals are in the form of two parallelogramic plates, as nearly as possible flat.

4. 1130. Yoruban. ♀, æt. e. 40. Calv.

A 79, B 20·7, C 15·2, *a* 5, *b* 5·8, *c* 4·4, D 14·5, E 7·5, F 5·2*p*, *a* 4·4, *b* 4·6, *c* 4·1, G 5·3, *a* 4·8, *b* 4·8, *c* 4·2, J 6·9, K 7·0.

5. 1131. Yoruban. ♀, æt. e. 40. Calv.

A 65, B 19·3, C 14·3, *a* 4·8, *b* 5·2, *c* 4·3, D 13·7, E 7, F 4·5*t*, *a* 4·2, *b* 4·5, *c* 3·8, G 5, *a* 4·4, *b* 4·6, *c* 3·9, I 4·9, J 6·4, K 7·1.

These 5 dolichocephalic calvaria of women are of beautiful form, especially Nos. 1128 and 1129. They were picked up near the palace of the King of Benin, in the fetich-ground. See *Fraser's Magazine* for February, March, and April 1863.

Presented by the distinguished traveller Capt. R. F. BURTON.

Average measurements of 4 calvaria of Yoruban women. A 73·2, B 20, C 14·7, *a* 4·9, *b* 5·2, *c* 4·6, D 14·1, E 7·2, F 5, *a* 4·3, *b* 4·6, *c* 4, G 5·3, *a* 4·6, *b* 4·7, *c* 4·2, I 5, J 6·9, K 7·4.

Extremes, A 65–79, J 64–76, K 70–76.

All dolichocephalic.

c. *Eboes*.

1. 292. Eboe. ♂?, æt. c. 30. Calv.

A69, B19·8, C14·3, *a* 5, *b* 5·1, *c* 4·2, D14·3, E6·9, F5·5*p*, *a* 4·5, *b* 5·1, *c* 4, G5·4, *a* 4·6, *b* 4·7, *c* 3·8, I5·2, J·79, K·78.

Spheno-parietal sutures short.

2. 293. Eboe. ♀, æt. c. 30. Calv.

A70, B19·9, C14·6, *a* 4·8, *b* 5·2, *c* 4·6, D14·2, E7·1, F5·3*p*, *a* 4·4, *b* 5·1, *c* 4, G5·4, *a* 4·4, *b* 4·6, *c* 4·2, I4·9, J·74, K·76.

3. 294. Eboe. ♀, æt. c. 50. Calv.

A65, B19·6, C14·5, *a* 5·1, *b* 4·7, *c* 4·7, D13·6, E7, F5*p*, *a* 4·3, *b* 4·9, *c* 3·9, G5·3, *a* 4·4, *b* 4·6, *c* 4·3, I4·9, J·71, K·75.

Slightly scaphocephalic from premature ossification of the sagittal suture, which is totally obliterated.

4. 295. Eboe. ♀, æt. c. 40. Calv.

A66, B19·5, C14·2, *a* 4·9, *b* 5·1, *c* 4·2, D13·5, E6·9, F5·1*p*, *a* 4·3, *b* 4·9, *c* 4, G5·5, *a* 4·4, *b* 4·7, *c* 4·1, I4·9, J·73, K·79.

A long triquetral or fontanel bone, on both sides, separates the alisphenoids from the parietals. Upper front teeth chipped to points.

Nos. 292 to 295 presented by the Rev. H. M. WEDDELL, of Old Calabar.

5. 1460. Eboe. ♂, æt. c. 35. Creek Town, Old Calabar.

A67, B19·7, C14·7, *a* 5, *b* 5·6, *c* 4·1, D14·3, E6·9, F5·2*p*, *a* 4·5, *b* 4·5, *c* 4·1, G5·5, *a* 4·7, *b* 5, *c* 4, H4·4, I5, J·75, K·79.

The parietals only just reach the alisphenoids on each side. The upper front teeth have been chipped in a very peculiar manner. A piece has been chipped out on each side of the crowns of the incisors and on the inner side of those of the canines.

6. 1461. Eboe. ♀, æt. c. 30. Creek Town, Old Calabar.

A68, B19·5, C14·2, *a* 5·4, *b* 4·6, *c* 4·2, D13·8, E7, F5*p*, *a* 4·4, *b* 4·6, *c* 3·8, G5·4, *a* 4·5, *b* 4·6, *c* 3·9, H3·9, I5, J·71, K·77.

Has had two small supernumerary upper teeth, one on each side, between and on the outside of the second and third molars. Has a triquetral bone in each spheno-parietal suture, and is also very remarkable for the absence of the nasal bones, which are substituted by a flat extension inwards of each of the nasal processes of the superior maxillaries. The same defect of development is observed in another African skull (No. 1066, Bakele). A failure of development of the *ossa nasi* occurs occasionally among African Negroes. I am not aware of its having been observed among other races. Dr. J. VAN DER HOEVEN, jun.,

has contributed an interesting memoir on this subject, with a number of neat outline figures (*Over afwijkingen in den vorm der neusbeenderen*, 1860). He instances the cranium of a Bosjesman, in the Collection of his father (*Cat. Cran.* No. 165), and gives a figure of the nasal region (fig. 1), where both *ossa nasi* are defective. In No. 134 of the same Collection, also figured (fig. 5), he finds an apparent defect of the left nasal bone, arising from obliteration of the suture between it and the frontal process of the left superior maxillary. In a series of African skulls, which seem to have belonged mostly to young women, in the Museum of the Royal College of Surgeons of England, which were collected by Capt. R. F. BURTON at Kilwa, on the Zanzibar coast, and are said to be chiefly of the *Wahiou* Tribe, there are examples of want of nasals.

Average measurements of the skulls of 2 Eboe men. A 68, B 19·7, C 14·5, *a* 5, *b* 5·3, *c* 4·1, D 14·3, E 6·9, F 5·3, *a* 4·5, *b* 4·3, *c* 4, G 5·4, *a* 4·6, *b* 4·8, *c* 3·9, H 4·4, I 5·1, J 7·6, K 7·8.

Average measurements of the skulls of 4 Eboe women. A 67, B 19·6, C 14·3, *a* 5, *b* 4·9, *c* 4·4, D 13·7, E 7, F 5·1, *a* 4·3, *b* 4·8, *c* 3·9, G 5·4, *a* 4·4, *b* 4·6, *c* 4·1, H 3·9, I 4·9, J 7·3, K 7·7.

All dolichocephalie.

Reference.—W. F. DANIELL, *On the Natives of Old Calabar*, Journ. of the Ethnol. Soc. 1848, i. 210.

f. Bubi.

379. Bubi, of Fernando Po. Imperfect calvaria or skull-cap, apparently of a man somewhat advanced in life. The sagittal suture is nearly obliterated, the coronal and lambdoid partially so. This imperfect calvaria does not present strongly marked negroid characters.

Presented by Consul T. J. HUTCHINSON, author of *Ten Years' Wanderings among the Ethiopians*, 1861.

g. Akassa.

1469. Akassa. ♂, æt. c. 35. Nun, mouth of Niger.

A 71, B 20·3, C 14·3, *a* 5·1, *b* 5, *c* 4·2, D 14·2, E 7·2, F 5·3, *a* 4·5, *b* 4·7, *c* 4·3, G 5·3, *a* 4·6, *b* 4·6, *c* 4·1, H 4·9, I 5·6, J 7·3, K 7·3.

The sagittal suture is totally obliterated, and others, as the coronal, lambdoid, and those surrounding the alisphenoids, almost so. This premature ossification of sutures is very frequent in African skulls, as is demonstrated by this "Catalogue." The upper front teeth have little pits chipped in their sides, as in the Eboe (No. 1460).

This fine skull was picked up, on the shore of the Nun, in the lamented Dr. BAIKIE's last expedition.

h. *Bakēlē*.

1. 1063. *Bakēlē*. ♂, æt. e. 70.

A85, B21·3, C15·5, *a*5·7, *b*5·1, *c*4·7, D15·3, E7·5, F5·7*p*, *a*4·8, *b*5·2, *c*4·4, G5·5, *a*5, *b*5·1, *c*4·7, H4·8, I5·2, J·76, K·73.

A fine, large, dolichocephalic skull, exceedingly European in form, but having flat nasals. Sagittal suture entirely obliterated.

2. 1064. *Bakele*. ♀, æt. e. 45. *Olomba mpolo*. Calv.

A70, B19·5, C14·4, *a*5·1, *b*4·8, *c*4·5, D14, E6·9, F5·2*p*, *a*4·6, *b*4·9, *c*4·1, G5·2, *a*4·5, *b*4·8, *c*4·2, I5, J·75, K·75.

The two middle upper incisors have been punched out in early life. Has a large diamond-shaped epaetal, and triquetral bones, in the squamous and lambdoid sutures, the former wholly cutting off the alisphenoids from the parietals.

3. 1065. *Bakele*. ♀, æt. e. 35. *Olomba mpolo*.

A69, B19·9, C14·3, *a*4·8, *b*5, *c*4·5, D13·9, E7, F5·4*p*, *a*4·5, *b*5, *c*4·2, G5·5, *a*4·5, *b*4·7, *c*4, H4·5, I5·1, J·77, K·78.

Exceedingly prognathous, with very flat nasals, and the nasal processes of superior maxillaries arched. The two left incisors of the lower jaw have been punched out in early life.

4. 1066. *Bakele*. ♀, æt. e. 60. *Olomba mpolo*.

A73, B19·6, C14·2, *a*5, *b*5, *c*4·2, D14·3, E6·6, F5·5*p*, *a*4·6, *b*4·7, *c*4, G5·2, *a*4·6, *b*4·7, *c*4·1, H4·1, I5·1, J·83, K·78.

The upper incisors have been punched out in early life, and the nasal bones are congenitally wanting.

5. 1067. *Bakele*. ♂, æt. e. 70. *Olomba mpolo*.

A78, B20·2, C14·4, *a*4·9, *b*5·3, *c*4·2, D15·1, E6·9, F5·5*p*, *a*4·8, *b*5·2, *c*4·2, G5·5, *a*4·7, *b*5, *c*4·3, H5·2, I5·3, J·79, K·79.

Some of the incisors of both mandibles appear to have been punched out in early life.

6. 1068. *Bakele*. ♀, æt. e. 3. *Olomba mpolo*.

7. 1069. *Bakele*. ♀, æt. e. 40. *Olomba mpolo*.

A66, B19·5, C13·8, *a*4·8, *b*4·7, *c*4·3, D14, E6·8, F5·3*p*, *a*4·6, *b*5·1, *c*4, G5·1, *a*4·5, *b*4·7, *c*4·1, H4·4, I4·6, J·78, K·75.

The posterior portion of the sagittal suture obliterated, and the denticleulations of this suture and of the middle of the coronal and lambdoid are effaced. The lower front teeth chipped to points.

8. 1070. *Bakele*. ♀, æt. e. 40.

A82·5, B20·2, C14·9, *a*5, *b*5·3, *c*4·6, D15·6, E7, F5·6*p*, *a*4·5, *b*5·3, *c*4·2, G5·6, *a*4·7, *b*5·1, *c*4·5, H4·6, I5, J·80, K·80.

This large skull has great interparietal diameter and an extensive neerosis of the left side of the lower maxilla.

i. *Osekani*.

1. 1071. *Osekani*. ♀, æt. e. 45.

A57·5, B18·5, C13·7, a4·5, b4·9, c4·3, D13·5, E6·5, F4·9p, a4·1,
b4·6, c3·8, G5·2, a4·5, b4·6, c4, H4·5, I4·7, J·75, K·80.

Three of the incisors of the lower jaw have been knocked out in early life. The temporal portions of the coronal suture are obliterated, and there is slight klinecephalism. The internasal suture is nearly effaced.

2. 1072. *Osekani*. ♀, æt. c. 35. *Olomba mpolo*.

A68·5, B19·9, C14·2, a4·7, b4·9, c4·6, D13·4, E7·2, F5·2p, a4·4,
b4·9, c4·2, G5, a4·5, b4·5, c4·4, H4·3, I4·9, J·72, K·69.

The whole of the sagittal suture, except about an inch at its fore part, is ossified, which has occasioned a lengthening of the calvarium. The internasal suture is also effaced.

3. 1073. *Osekani*. ♀, æt. c. 40.

A73, B19·7, C14·2, a4·8, b5·2, c4·2, D14·5, E6·8, F5·5p, a4·6,
b5·2, c3·9, G5·4, a4·6, b4·7, c4, H4·4, I5·2, J·80, K·79.

The upper front teeth have been chipped to points.

4. 1074. *Osekani*. ♂, æt. e. 35.

A77·5, B20, C15·5, a5·6, b5·1, c4·8, D15·5, E7, F5·5p, a4·7,
b5·2, c4·1, G5·7, a4·7, b4·9, c4·4, H4·1, I4·8, J·78, K·81.

Has only a single, small, irregular nasal bone.

j. *Nkami*.

1075. *Nkami*. *Camma Country*, on the Fernand Vas. ♂, æt. e. 6.
A Slave-boy.

k. *Asango*.

1076. *Asango*. ♀, æt. c. 35.

A55, B18·5, C13·2, a4·5, b4·3, c4·4, D13·2, E6·5, F5p, a4·2,
b4·9, c3·9, G4·8, a4·2, b4·3, c4, H4·3, I4·7, J·77, K·73.

Both upper and lower incisors have been curiously chipped to sharp points.

l. *M'Pongwe*.

1077. *M'Pongwe*. ♀, æt. e. 45.

A75, B20·3, C14·5, a5, b5·2, c4·3, D14, E7·3, F5·2p, a4·4,
b4·9, c4·1, G5·4, a4·5, b4·7, c4·3, H4·4, I5·1, J·71, K·74.

The inner corners of the cutting-edges of both the middle upper incisors have been chipped off.

Capt. R. F. BURTON speaks of the great beauty of the M'Pongo women (*Fraser's Mag.*, April 1863).

m. *Asira*.

1078. *Asira*. ♂, æt. e. 35. Calv.

A74, B20, C14·1, *a*4·8, *b*4·8, *c*4·5, D14·5, E7·1, F5·2*p*, *a*4·5, *b*4·7, *c*4, G5·3, *a*4·5, *b*4·7, *c*4·3, I5·2, J·73, K·74.

This calvarium has a *supernumerary* incisor on the right side. The four in place have been chipped to very acute points.

n. *M'Fans*.

1. 1079. *M'Fan*. ♀, e. 35.

A68, B19·7, C13·8, *a*4·8, *b*4·9, *c*4·1, D13·8, E6·8, F5·2*p*, *a*4·6, *b*4·6, *c*4, G5·3, *a*4·4, *b*4·5, *c*4·1, H4·8, I5, J·78, K·76.

There is complete *synostosis* of the parietals.

2. 1080. *M'Fan*. ♀, æt. e. 30.

A70, B19·3, C14, *a*4·8, *b*4·9, *c*4·1, D14·3, E6·8, F5·3*p*, *a*4·5, *b*5, *c*4·5, G5·5, *a*4·6, *b*4·8, *c*4, H4·1, I5·1, J·78, K·80.

The broad, flat nasals are of equal breadth throughout.

3. 1081. *M'Fan*. ♀, æt. e. 70.

A74, B20·1, C14·3, D14·3, E6·8, F5·6*t*, *a*4·7, *b*4·9, *c*3·9, G5·4, *a*4·6, *b*4·8, *c*4·7, H4·3, I5·4, J·82, K·79.

The sagittal, coronal, and lambdoid sutures are completely ossified and effaced. The squamous sutures and those surrounding the alisphenoids are open.

There is a good deal of variety among these skulls of the tribes of equatorial Africa. Some are long and narrow, others broad in the interparietal region; contrary to recognized doctrine, four of them (out of 18) are brachycephalic¹. They are generally prognathous, some greatly, others only slightly so. The nasals differ much; some are of a very peculiar form, as wide above as below. The punching out of incisor teeth is not uncommon (although not mentioned by travellers); and these organs bear indications, *on their inner sides*, of the use of some substance, most likely of diet, which stains the enamel like betel.

This fine series of crania was presented by R. Bruce N. WALKER, Esq., F.R.G.S.

Some account of these tribes of the Gaboon may be found in J. L. WILSON'S *Western Africa*, 1856, Pongo Country, p. 283. Du CHAILLU, *Adventures in Equatorial Africa*, 1861; *Ethnol. Trans.* i. 305. Capt. R. F. BURTON, *A Day amongst the Fans*, *Anthrop. Rev.* i. 43; *Athenæum*, Nov. 22, 1862, p. 662.

¹ VON BAER, *Bericht über die Zusammenkunft* 1861, S. 5.

Average Measurements of the Skulls of Tribes of Equatorial Africa.

♂, averages of 4 crania of men. A78·6, B20·3, C14·8, a5·2, b5, c4·5, D15·1, E7·1, F5·4, a4·7, b5, c4·1, G5·5, a4·7, b4·9, c4·4, H4·6, I5·1, J·76, K·77.

Extremes, A74–85, J·73–79, K·73–81.

♀, averages of 13 crania of women. A69·3, B19·5, C14·1, a4·8, b4·9, c4·3, D14·4, E6·8, F5·3, a4·4, b4·9, c4, G5·2, a4·4, b4·6, c4·1, H4·3, I4·9, J·77, K·76.

Extremes, A55–82·5, J·71–83, K·69–80.

Averages of 17 skulls of men and women. A73·9, B19·9, C14·4, a5, b4·9, c4·4, D14·7, E6·9, F5·3, a4·5, b4·9, c4, G5·3, a4·5, b4·7, c4·2, H4·4, I5, J·76, K·76.

o. Congo Tribes.

1. 1013. Congo. ♂, æt. e. 30. Calv. D.C.
A65, B19·6, C14, a5, b5, c4, D14, E6·9, F5·3p, a4·4, b5·1, c4, G5·3, a4·5, b4·5, c3·9, I5, J·76, K·76.

2. 1014. Congo. ♂, æt. e. 30. Calv. D.C.
A62, B19·3, C13·5, a4·8, b4·5, c4·2, D14·3, E6·8, F5·2p, a4·3, b4·9, c4, G5·1, a4·3, b4·5, c4·1, I5·2, J·76, K·75.

Nos. 1013 and 1014 presented by Capt. FISHBURN, R.N., said by DEVILLE to be the only officer who survived the Congo Expedition of 1816.

References.—BLUMENBACH, *Dec. Cran. Tab. xviii.* VIMONT, *Traité de Phrénologie*, pl. eiii. fig. 2. C. G. CARUS, *Grundzüge einer Cranioscopie*, Taf. ii. fig. ii. RETZIUS, *Ethnolog. Schriften*, pl. ii. fig. v.

Up to the present time, there is an entire absence of Eastern African skulls in this Collection. Prof. A. ECKER has obtained a fine series, which he has described in an important Memoir, illustrated with 12 Plates (*Schädel nordost-afrikanischer Völker aus der von Prof. BILHARZ in Cairo hinterlassenen Sammlung, abgebildet und beschrieben von Dr. Alexander ECKER*: Frankfurt am Main, 1866, 4to).

p. Bomba.

372. Bomba. ♂, æt. e. 14.

Died in the island of St. Vincent in 1851. This skull is of great interest, as it has all the Negro peculiarities strongly expressed, although so young¹. The two middle upper incisors have already had their inner corners clipped off.

¹ The fact of the special race-characters being exhibited in the skulls of children, of which there are many examples in this Collection, is one of great importance in Anthropology. In some instances, as observed by SÖMMERING (*Die körperl. Verschied. des Negers*, S. 3), they are seen in the embryo. BLUMENBACH refers to the phenomenon (*De G. H. Var. nativ.* ed. 3. p. 210); and PRICHARD (*Phys. Res.* ed. 2. i. 157) reasons well upon it.

q. *Manganja*.

(1241.) *Manganja*. ♂, æt. c. 75. Edentulous. Valley of the River Shiré. Calv.

A 85, B 21·3, C 15·9, *a* 5·3, *b* 5·4, *c* 5·2, D 15, E 7·8, F 5·4_p, *a* 4·6, *b* 5·1, *c* 4·3, G 5·7, *a* 4·8, *b* 4·9, *c* 4·5, I 5·3, J 6·9, K 7·3.

This large dolichocephalic calvarium is remarkable for having two parietal foramina of unusual size, which pass *directly* through both tables. The surface of the frontal bone is scattered over with small depressed nodular exostoses.

This calvarium was obtained in LIVINGSTONE's second expedition, and presented by Drs. MELLER and J. KIRK, through Dr. BEDDOE.

These people, the Wanyassa of the Slave-dealers of both coasts, are accustomed to serrate the edges of their upper incisors, giving each of the middle ones three denticulations, the lateral ones two. In this calvarium all the teeth are absent.

Reference.—W. TURNER, M.B., F.R.S.E., *Notice of the Cranium of a Manganya Negro* (Proc. R. Physical Soc. Edinb. 1865). In this short but excellent paper there is much information respecting these people, and two figures of the skull itself.

The African tribes appear to stand but little below the peoples of the Indian archipelago in the variety of the modes of torturing their incisive teeth, either as tribal marks, like the figures they wear produced by scars on the skin, or in caprice, or as prevailing fashions. Many examples are seen in this Collection. There are tribes which, like the Australians and some of the ancient Peruvians, punch out their teeth at puberty. LIVINGSTONE says both sexes of the Batoka knock out the upper front teeth at this age. The Unyamuezi, Capt. SPEKE states, extract their lower incisors, and chip off obliquely the inner edges of the middle upper incisors, so as to leave an opening of the form of an inverted V (A). This latter custom is common among many other tribes. Our Nos. 1230 (♂ Dahoman), 1077 (♀ M'Pongwe), and 372 (♂ Bomba) all present this interincisive triangular opening into the mouth. Nos. 1064, 1065, 1066 (all ♀), and 1067 (♂) (Bakeles), and 1071 (♀ Osekani) exhibit the effects of knocking out the front teeth, usually the upper, but some the lower, and others both upper and lower. And there are many examples of serrated teeth, where the incisors are clipped into points. In Nos. 262 (♂ Fantee) and 1073 (♀ Osekani) the upper incisors have been pointed. In No. 1078 (♂ Asira) the *five* upper incisives have been acutely pointed. In No. 1069 (♀ Bakele) the lower incisors have been clipped to points. And in No. 1076 (♀ Asango) both upper and lower incisors have been manipulated thus. The *Manganja* are seen, from Dr. TURNER's memoir, to point the upper teeth with more delicate manipulation, and to make two depressions on

the cutting-edge of each tooth, so as to present a denticulation in the middle and one on each side. Lastly, the **Eboe** (No. 1460, ♂) and the **Akassa** (No. 1469, ♂) exhibit chipping at the sides of the upper incisors and canines, without any interference with the cutting-edges. As far as my observations extend, it appears that the chippings and filings practised on the teeth of African tribes are more superficial than those of the people of the Indian archipelago, among whom the erosions frequently denude the dentine, and even pass through it into the pulp-cavity.

G. RACES OF SOUTH AFRICA.

a. *Hottentots*.

1. 534. *Hottentot*. "ANNA WHITBOY." ♀, æt. 25.

A 64, B 19·2, C 14·4, a 5·3, b 5, c 4·1, D 13·4, E 6·7, F 5·1p, a 4·4, b 5, c 4, G 4·9, a 4·5, b 4·5, c 3·7, H 4·1, I 4·3, J·76, K·73.

A diminutive cranium of beautiful form, of a woman who was murdered by her husband, "OORSON COERT," a *Hottentot*, March 27, 1857. The notches between the tips of the incisors and canines, on both sides of the mouth, indicate the lady's devotion to nicotian solace:—

Tobacco engages
Both sexes, all ages.

2. 535. *Hottentot*. "METJE JONKERS." ♀, æt. 30.

A 69, B 19·9, C 14·4, a 4·9, b 5·2, c 4·3, D 14, E 7·1, F 5·4p, a 4·4, b 4·9, c 4·2, G 5·4, a 4·3, b 4·7, c 4·1, H 4·2, I 4·6, J·76, K·76.

Died at Graham's Town, Aug. 10, 1857. The left zygoma has been depressed by violence during life; and there is a large orifice in the left orbital plate of the ethmoid.

Nos. 534 and 535 presented by W. Guybon ATHERSTONE, M.D.

3. 859. *Hottentot*. ♀, æt. e. 16. Calv. D.C.

Bears traces of annular deformation.

4. 998. *Hottentot*. ♀, æt. e. 30. Calv. D.C.

B 20·1, C 14·3, a 4·8, b 4·8, c 4·9, D 13·7, E 7·1, F 5·4p, a 4·6, b 5·2, c 4·3, G 5·1, a 4·3, b 4·5, c 4·1, H 4·2, I 4·8, J·76, K·71.

Average measurements of the skulls of 3 *Hottentot* women.

A 66·5, B 19·7, C 14·3, a 5, b 5, c 4·4, D 13·7, E 6·9, F 5·3, a 4·4, b 4·9, c 4·1, G 5·1, a 4·3, b 4·5, c 3·9, H 4·1, I 4·5, J·76, K·73.

References.—VIMONT, *Traité de Phrénologie*, exvii. fig. 2. G. SANDIFORT, *Tab. Cran.*, "Cranium *Hottentotae*." J. WYMAN, *Obs. on the Skeleton of a Hottentot*, Proc. Boston Soc. Nat. Hist. 1863.

b. *Kafirs.*

1. 392. Kafir. ♂, æt. e. 50. Calv.

A76, B21·3, C15·6, *a*5·3, *b*5·2, *c*5·1, D14, E7·7, F5·4*p*, *a*4·5, *b*5, *c*4·4, G5·4, *a*4·6, *b*4·6, *c*4·2, I5·3, J·70, K·70.

A heavy calvarium, of great length. The internasal suture obliterated.

2. 393. Kafir. ♂, æt. e. 60. Calv.

A82, B21·1, C15·9, *a*5·5, *b*5·5, *c*4·9, D14·9, E7·5, F5·6*p*, *a*4·7, *b*5·2, *c*4·3, G5·5, *a*4·6, *b*4·8, *c*4·4, I5, J·74, K·73.

The diminutive nasal bones are irregular.

Nos. 392 and 393 presented by Sir Geo. GREY, Governor of the Cape Colony.

3. 536. Kafir. "XONONGO." ♂, æt. 50.

A86, B21, C15, *a*5·2, *b*4·7, *c*5·1, D15, E7·5, F5·6*p*, *a*4·9, *b*5·3, *c*4·5, G5·6, *a*4·8, *b*5, *c*4·3, H4·1, I5·3, J·74, K·74.

The stature of "XONONGO" was 6 ft. 2 in. He died Sept. 28, 1857. His scalp and skin of the chin are preserved in spirits. The squamous sutures and those of the alisphenoids are nearly obliterated in this fine skull.

4. 537. Kafir. "NODUKO." ♀, æt. 60.

A67, B20, C14·7, *a*4·8, *b*5·3, *c*4·6, D14·1, E7·3, F5·1*p*, *a*4·3, *b*4·9, *c*4·3, G5·5, *a*4·6, *b*4·7, *c*4·2, H3·8, I5·1, J·70, K·75.

The lower part of the coronal suture on both sides is obliterated, and the alisphenoid of the right side is quite synostosed with the neighbouring bones.

5. 538. Kafir. "JAEKALL." ♂, æt. e. 20. Calv.

A82, B21·2, C15·3, *a*5·1, *b*5·3, *c*4·9, D13·7, E7·7, F5·3*p*, *a*4·3, *b*4·9, *c*4·3, G5·6, *a*4·5, *b*4·9, *c*4·5, J·68, K·72.

Killed at Bavian's River, in the war of 1850-52. Bears a very feminine appearance in its base, yet there cannot be any doubt of its being the calvarium of a man.

6. 540. Kafir. ♂, of uncertain age. Imperf. calv.

A77, B20·8, C14·7, *a*5·1, *b*5·1, *c*4·5, D14·3, E7·4, F5·4*p*, *a*4·3, *b*5·1, *c*4·2, G5·5, *a*4·7, *b*4·7, *c*4, J·73, K·74.

The sagittal suture is almost entirely obliterated; but there is no *scaphocephalism*; on the other hand, this anomaly of development has occasioned slight *klinocephalism*.

Derived from the battle-field of Gwanga in South Africa.

7. 542. Kafir. Lower jaw, of great size and very characteristic form.

Nos. 536 to 542 presented by Dr. W. G. ATHERSTONE.

8. 586. Kafir. ♂, æt. e. 30.

A64, B20·2, C14·6, a4·8, b5·4, c4·4, D13·9, E7·4, F4·9p, a4·3, b4·8, c4·1, G5·2, a4·5, b4·6, c4·3, H4·2, I5·1, J·66, K·70.

This fine Kafir skull was brought by Mr. P. McINTOSH, in 1858, from Natal, and is derived from the neighbourhood of a station named Kolobeng, in a valley near the head of the Orange River—a spot which marks the site of a battle between the Boers and MOSLEKETZE's men during the late war.

Average measurements of the skulls of 6 Kafir men. A77·8, B20·9, C15·2, a5·1, b5·2, c4·8, D14·3, E7·5, F5·3, a4·5, b5, c4·3, G5·4, a4·5, b4·7, c4·3, H4·1, I5·2, J·71, K·72.

Extremes, A64–86, J·66–74, K·70–74.

References.—BLUMENBACH, *Dec. Cran.* Tab. lxviii. M. J. WEBER, *Ur- und Racen-Formen*, Tab. xvii., xviii. VIMONT, *Traité de Phrénol.* pl. cxvi. fig. 2. G. SANDIFORT, *Tab. Cran. div. Nat.*, "Cranium Caffri." J. VAN DER HOEVEN, *Tijdschr. voor Natuurl. Geschied.* D. iv. pl. ii.; *Negerstam*, pl. iii. C. G. CARUS, *Atlas der Cranios.* H. i. Taf. vii. PRICHARD, *Phys. Res.* ed. 4, i. fig. 5. RETZIUS, *Ethnolog. Schriften*, pl. ii. fig. iv.

e. Zulus.

1. 570. Zulu. ♂, æt. e. 40. Calv.

A81, B20·8, C15·3, a5·2, b5·6, c5·5, D15·2, E7·4, F5·5p, a4·7, b4·4, c4·5, G5·6, a4·9, b5, c4·2, I5·3, J·74, K·75.

2. 571. Zulu. ♂, æt. e. 30. Calv.

A72, B19·9, C14·1, a4·9, b5·3, c3·9, D14, E7·2, F5·1p, a4·4, b4·5, c4·5, G5·4, a4·4, b4·5, c4, I5·5, J·70, K·76.

3. 572. Zulu. ♂, æt. c. 70. Calv.

A74, B20·3, C14·8, a5, b5·4, c4·4, D14·3, E7·2, F5·2p, a4·6, b4·8, c3·9, G5·5, a4·7, b4·9, c4·2, I4·9, J·72, K·75.

In the three preceding calvaria there is a partial obliteration of the sagittal suture.

4. 573. Zulu. ♂, æt. c. 35. Calv.

A73, B20, C14·3, a5·1, b5·1, c4·1, D14·5, E7, F5·2p, a4·6, b4·7, c4·3, G5·6, a4·5, b4·8, c4·2, I5·3, J·74, K·78.

Has slight traces of annular deformation.

Nos. 570 to 573 are derived from the field of a battle which took place Dec. 2nd, 1856, on the Zulu border. They were presented by John WALMSLEY, Esq.

Average measurements of the skulls of 4 Zulu men. A75, B20·2, C14·6, a5, b5·3, c4·5, D14·5, E7·2, F5·2, a4·6, b4·6, c4·3, G5·5, a4·6, b4·8, c4·1, I5·2, J·72, K·76.

Although it is not easy in words to describe the difference, yet in their general aspect the Kafir crania are distinguishable from those of the Zulus. All three of the above series are marked by length, by narrowness, and by development in the occipital region. It seems as if the occipital vertebra were more of a balance to the frontal. The measurements show that in the three Hottentot skulls the maximum difference between *Fa* and *c* is .4 in., the minimum .2 in. In the seven Kafir crania the maximum difference is only .4 in., whilst in two of them the frontal and occipital measures are equal. In the four Zulus the maximum difference is .7 in.; but in one of them the occipital breadth exceeds the frontal by .1 in. This may be taken as an additional confirmation of the views of M. GRATIOLET. These races of South Africa may, to use his term, be esteemed "occipital races;" their dolichocephalism is occipital (*Bull. de la Soc. d'Anthropologie*, ii. 142, 254).

d. *Bushmans.*

1. 388. Bushman. ♂, æt. e. 35. Calv.

A65, B19·7, C14·7, *a* 5·2, *b* 5, *c* 4·5, D12·8, E 7·3, F4·9*p*, *a* 4·1, *b* 4·7, *c* 4·1, G 5, *a* 4·2, *b* 4·3, *c* 3·8, I 4·9, J·67, K·68.

The internasal suture is entirely obliterated, and the synostosed flat nasals are reduced to almost a quadrangular plate.

2. 389. Bushman. ♀, æt. e. 16¹. Calv.

A70·5, B19·4, C14·3, *a* 5·2, *b* 4·5, *c* 4·6, D13·6, E 6·9, F5·1*p*, *a* 4·4, *b* 4·8, *c* 4·3, G 4·9, *a* 4·3, *b* 4·5, *c* 4·1, I 4·4, J·73, K·71.

3. 390. Bushman. ♀, æt. e. 50.

A60, B19, C14·4, *a* 5·1, *b* 4·7, *c* 4·6, D12·7, E 6·8, F4·9*p*, *a* 4·2, *b* 4·8, *c* 3·9, G 4·9, *a* 4·1, *b* 4·2, *c* 3·8, H 4·1, I 4·6, J·72, K·72.

The diminutive nasal bones are consolidated into one small scale.

4. 391. Bushman. ♀, æt. e. 5. Calv.

In Nos. 388 and 391 a ridge descends the frontal in the place of the suture.

Nos. 388 to 391 presented by Sir Geo. GREY.

5. 539. Bushman. ♀, æt. e. 20.

A60, B19·2, C14·3, *a* 5·3, *b* 4·5, *c* 4·5, D12·6, E 6·9, F5·1*p*, *a* 4·1, *b* 4·8, *c* 4, G 5, *a* 4·2, *b* 4·4, *c* 4·2, H 3·8, I 4·6, J·73, K·72.

Presented by Dr. W. G. ATHERSTONE.

¹ The spheno-basilar synchondrosis is quite open. According to the observations of Prof. WELCKER, it is ossified from the 16th to the 20th year (*Wachsthum und Bau des menschl. Schädels*, S. 86).

6. 541. Bushman. ♀.

Parietals, bones of the pelvis, and other portions of the skeleton of the same woman. The extreme length of the femur is 14·5 inches, that of the tibia 12·2 in., and that of the humerus 10·3 in. The pelvis agrees closely with that of the Bushwoman of G. VROLIK's Pl. v., except being smaller in size, which probably arises from the early age of this specimen. The great vertical elevation of the ilia is striking; and this excess of height, with diminution of breadth in these bones, quite coincides with this author's observations (G. VROLIK, *Considérations sur les diversités des Bassins*, p. 19; *Platen behoorende tot de beschouwing van het Verschil des Bekkens*, fol., 1826).

These beautiful and symmetrical little crania of Bushmans present a complete refutation of the hypothesis of the unity of the human race, as it is usually understood, as well as of the developmental hypothesis. The two are intimately allied, and what refutes the one generally overthrows the other. It may also be said that those who admit the one have no valid grounds for rejecting the other. The much vaunted conversions to modern Lamarekism are only instances of progress in a course almost premeditated.

7. 670*. Bushman. *a*, east of face of man; *b*, of face of woman; *c*, of arm of man; *d*, of arm of woman; *e*, of leg of man; *f*, of leg of woman.

Presented by Prof. John GOODSIR, F.R.S.

Average measurements of 3 skulls of Bushman women. A 63·5, B 19·2, C 14·3, *a* 5·2, *b* 4·5, *c* 4·5, D 12·9, E 6·8, F 5, *a* 4·2, *b* 4·8, *c* 4, G 4·9, *a* 4·2, *b* 4·3, *c* 4, H 3·9, I 4·5, J·73, K·72.

References.—BLUMENBACH, *Dec. Cran.* Tab. xlv. G. SANDIFORT, *Tab. Cran.*, "Cranium Boschjesmanni."

The Collection of the Army Medical Department is by far the richest in skulls of Africans, especially those of Known Tribes. Dr. Geo. WILLIAMSON enumerated 198 African crania in this Museum. In his *Observations*, he describes skulls of the following Tribes:—Mandingos, Iolofs, Timmanis, Sossoos, Kassos, Kroomen, Hausas, Fantis, Attans or Appas, Papas or Mahais, Bareonkas or Mokas, Ibos, Ashantis, Colabars, Kaungas, Congos, Kafirs, Hottentots, Bushmans, Mozambiques, and Madecasses. African skulls are expressly conspicuous in a scale for indicating the diversity of form in the anterior nasal orifice, to which he first called attention. A very imperfect attempt was made in the illustrations to an excellent memoir, on *Sierra Leone and its Inhabitants*, by Mr. Robt. CLARKE, to exhibit portraits of many of the African tribes (*Trans. Ethnol. Soc.* ii. 320). The original drawings were far from being commendable; but the lithographs are much ruder—too rude to be of use for ethnological purposes.

There are a few points deserving of comment in these African

skulls, but chiefly bearing upon those from the West Coast. 1. They do not exhibit any instance of *diastema* among the teeth, such as was observed by Rudolph WAGNER in a Kafir skull of the Erlangen Collection (Carl VOGT, *Vorlesungen über den Menschen*, i. 190). 2. They present three instances of *supernumerary teeth* (Nos. 154, 1228, 1078). This has been regarded as a tendency to pitheoid forms, said not to have been observed in Europeans. SÖMMERRING's extraordinary instance of the Negro calvarium with *six* true molars on both sides has been referred to already. In his treatise on the difference of the Negro (*Ueber die körperliche Verschiedenheit des Negers*) he alludes to the occurrence of supplementary teeth; and in the *Catalogue* of his Museum this remark is appended to the specimen above-mentioned:—"Jam in quinque Aethiopis vidit SOEMMERRINGIUS, umquam tamen in Europaeis neque ipse neque alii invenerunt." 3. The *suture* joining the alisphenoid to the parietal is sometimes wanting, and often very short; or, in other words, the two bones either do not meet at all or are only joined by an unusually short suture. This is an animal form, and at the same time indicates a less development of the anterior lobes of the brain and their convolutions. 4. In two instances (Nos. 1461 and 1066) there is an entire absence of *nasal bones*; in No. 1074 only one exists, a simious peculiarity (Dr. J. VAN DER HOEVEN, Jun., *Over afwijkingen in den vorm der neusbeenderen*). 5. *Synostosis* is common among the West Coast skulls, especially between the parietals. Nos. 100, 1229, 1234, 1128, 294, 1072, and 1079 present a complete ossification of the sagittal suture, but with comparatively little deformation or compensatory development; so that they can scarcely be said to be scaphocephalic. Three of the Zulus (Nos. 570, 571, and 572) exhibit partial obliteration of this suture. Sir THOS. BROWN said, long ago, "handsome formed Skulls give some analogie of fleshly resemblance. A critical view of Bones makes a good distinction of Sexes. Even colour is not beyond conjecture; since it is hard to be deceived in the distinction of *Negros'* Skulls" (*Hydriotaphia, Urn-Burial*, 1686, p. 13).

H. RACES OF MADAGASCAR.

975. Betimasara. ♂, of middle age. Imperf. calv. D.C. B 20·6, C 15·2, a 5·5, b 5·2, c 4·5, E 7·1, F 5·6t, a 4·7, c 4·1, G 5·5, J 78, K 77.

Appears to be less dolichocephalic than the races of the continent of Africa; and such seems to be the general character of the skulls of the people of Madagascar (PRUNERBEY, *Mém. de la Soc. d'Anthrop.* ii. 432, Table).

Reference.—DUMOUTIER, *Voy. au Pôle Sud*, *Anthrop.*, Atlas, pl. 42, figs. 3, 4.

IV. AMERICAN RACES.

A. NORTH-AMERICAN RACES.

a. ESQUIMAUX.

1. *Esquimaux of Greenland.*

1. 36. Esquimaux. ♂, æt. c. 50. *Hunde Islands.* Calv.
A93, B22·2, C15·9, a5·5, b5·5, c4·9, D14·7, E8·1, F5·7t, a4·9,
b4·7, c4·7, G6, a5·7, b5·7, c4·2, I6·3, J·70, K·73.

This fine megalcephalic pyramidal calvarium is very extraordinary in all its dimensions, and may be regarded as a *typical* example. Possibly it may have belonged to an unusually tall man for his race. The crowns of the teeth, as is common among Esquimaux, are reduced to an even plane.

2. 37. Esquimaux. ♂, æt. c. 50. *Hunde Islands.* Calv.
A84·5, B21, C15·3, a5·6, b5·2, c4·5, D15·1, E7·6, F5·6t, a4·8,
b5·2, c4·5, G5·7, a4·9, b5, c4·3, I5·5, J·73, K·75.

3. 38. Esquimaux. ♀, æt. c. 20. *Hunde Islands.* Calv.
A60, B19·2, C14·9, a5, b5·1, c4·8, D13·6, E7, F5p, a4·4, b4·9,
c4, G5·6, a4·5, b4·8, c4, I4·7, J·71, K·80.

Has a triquetral or fontanel bone in each speno-parietal suture.

These three very interesting calvaria are from the Hunde Islands, on the west coast of Greenland, and were procured by Captain E. A. INGLEFIELD, R.N., in his voyage in the steamer 'Isabel,' in 1852. The island from which they were derived is now unoccupied. They were taken from *open* tombs (for in such it was the custom of the aboriginal and unmixed Esquimaux to deposit the dead), and are ancient and of pure blood. The calvaria and femora were the only portions of the bodies remaining, and there were no lower jaws.

Presented by Capt. E. A. INGLEFIELD, R.N.

4. 110. Esquimaux. ♀, æt. c. 30. *Sabine Islands.* Calv.
B20·7, C15·2, a5·2, b5·3, c4·7, D14·3, E7·5, F5·3p, a4·5, b5,
c4·4, G5·5, a4·8, b4·9, c4·3, J·70, K·73.

From one of the Sabine Islands, west coast of Greenland.

5. 568*. Esquimaux. ♂, æt. c. 40. Calv.
B21·3, C15·6, a5·5, b5·5, c4·6, D14·7, E7·4, F6t, G5·7, J·81, K·77.
Place of origin unknown. Presented by Prof. Allen THOMSON.

6. 585. Esquimaux. ♂, æt. e. 70. *Godhavn*.
A76, B21, C15·2, a5·2, b5, c5, D14·3, E7·5, F5·6t, a4·8, b4·7,
c4·9, G5·8, a4·7, b4·9, c4·1, H4·9, I5·9, J·74, K·77.

This fine skull was obtained at Godhavn, on the west coast of Greenland, by Sir F. L. McCLINTOCK, R.N., in his voyage in the 'Fox' (1857-59).

Presented by Sir F. L. McCLINTOCK, R.N.

7. 876. Esquimaux. ♂, æt. c. 50. *Baffin's Isles*. D.C.
A80, B21, C16, a5·5, b5·5, c5, D14·8, E7·7, F5·3t, a4·6,
b4·9, c4·3, G5·9, a5, b5, c4·2, H4·8, I5·7, J·68, K·76.

8. 877. Esquimaux. ♂, æt. e. 45. *Baffin's Isles*. D.C.
A83, B20·5, C15·6, a5·5, b5·4, c4·7, D14·4, E7·4, F5·3p, a4·5,
b5·1, c4·2, G5·8, a4·9, b5, c4·2, H4·9, I5·7, J·71, K·78.

9. (878.) Esquimaux. ♀, æt. e. 40. *Baffin's Isles*. Calv. D.C.
A73, B20·3, C15·1, a5·1, b5·1, c4·9, D14·2, E7·4, F5·2p, a4·4,
b5, c4·2, G5·6, a4·7, b4·9, c4·2, I5·5, J·70, K·74.

Nos. 876 to (878) from Baffin's Isles, Melville Bay, 1824.

10. 878. Esquimaux. ♀, æt. e. 20. Calv. D.C.
A71·5, B19·8, C14·8, a5, b5·1, c4·7, D13·6, E7·3, F4·9t, a4·3,
b4·5, c4·2, G5·5, a4·7, b4·9, c4·1, I5·1, J·67, K·75.

11. 879. Esquimaux. ♀, æt. e. 35. Calv. D.C.
A79, B20·6, C15, a5, b5·2, c4·8, D14·6, E7·4, F5·5t, a4, b5,
c4·4, G5·4, a4·8, b4·8, c4, J·73, K·71.

12. 880. Esquimaux. ♀, æt. e. 18. Imperf. calv. D.C.

13. 915. Esquimaux. ♀, of uncertain age. Calv. D.C.
A69, B20·2, C14·5, D13·8, E7·4, F5·2t, a4·2, b4·5, c4·1,
G5·2, a4·6, b4·7, c4, I5·2, J·70, K·71.

14. 942. Esquimaux. ♂, æt. e. 10. Calv. D.C.

Has, even at this early age, the broad flat face, the pyramidal form, and middle ridge running down the frontal, and other diagnostic marks of the typical Esquimaux calvarium.

15. 1366. Esquimaux. "Greenlander." ♂, æt. e. 35. V.L.d.J.
A93, B22·7, C15·7, a5·2, b5·3, c5·2, D16·3, E7·7, F6·7t, a5·5,
b5·6, c5·1, G5·3, a5, b4·9, c4·4, H5·1, I6, J·87, K·68.

This megalocephalic skull of a man, who died in the Hospital at Amsterdam, is brachycephalic and platycephalic, and devoid of the *pyramidal form*. It has a broad flat face. The nasals and nasal processes of the superior maxillaries are broad and rather

flat, yet the former meet in a ridge. The teeth are not at all worn down. There is no indication of *hydrocephalus*, unless it be in the very flat, low, discoidal form of the calvarium (K·68), which is not thin. It is a very remarkable skull, and one cannot but regret that its history is unknown. Although of such inordinate magnitude, it by no means marks the limits of colossal size of the cranium. In Prof. E. SANDIFORT'S *Museum Anatomicum*, Lugd. Batav. 1793, fol., vol. ii. Tab. xi., xii., are given figures of the *Os Frontis* and *Os Occipitis* and *Ossa Temporalia* of a very much larger skull. The first measures 8·6 inches in its transverse diameter.

Average Measurements of Skulls of Esquimaux from Greenland and the Neighbouring Isles.

5 ♂. A 82·7, B 21·1, C 15·4, *a* 5·5, *b* 5·3, *c* 4·8, D 14·6, E 7·6, F 5·5, *a* 4·7, *b* 4·9, *c* 4·5, G 5·8, *a* 5, *b* 5·1, *c* 4·2, H 4·8, I 5·8, J·72, K·76.

Extremes, A 76–93, J·68–81, K·73–78.

5 ♀. A 70·8, B 20·1, C 15, *a* 5, *b* 5·1, *c* 4·7, D 14, E 7·3, F 5·1, *a* 4·3, *b* 4·8, *c* 4·2, G 5·5, *a* 4·5, *b* 4·8, *c* 4·1, I 5·1, J·70, K·75.

Extremes, A 60–79, J·67–73, K·71–80.

10 ♂ and ♀. A 76·7, B 20·6, C 15·2, *a* 5·2, *b* 5·2, *c* 4·7, D 14·3, E 7·4, F 5·3, *a* 4·5, *b* 4·8, *c* 4·3, G 5·6, *a* 4·7, *b* 4·9, *c* 4·1, I 5·4, J·71, K·75.

References.—C. G. CARUS, *Atlas der Cranioscopie*, H. i. Taf. iii. SANDIFORT, *Tab. Cran.*, "Cranium Fœm. Groenlandicæ."

2. *Esquimaux of the Eastern side of America.*

1. 108. Esquimaux. ♂, æt. c. 60. *Cape Warrender*. Calv. A 77, B 20·8, C 15·4, *a* 5·1, *b* 5·4, *c* 4·9, D 15·1, E 7·5, F 5·4, *a* 4·8, *b* 5, *c* 4·4, G 5·9, *a* 5, *b* 5, *c* 4·3, J·72, K·78.

Has a very large paramastoid process on the left side, which has articulated with the atlas. It is about an inch long and as thick as the little finger.

2. 109. Esquimaux. ♂, æt. c. 70. *Cape Warrender*. Calv. A 80, B 20·7, C 14·6, *a* 4·9, *b* 4·4, *c* 5·3, D 14·1, E 7·4, F 5·6, *a* 4·5, *b* 5·1, *c* 4·5, G 5·6, *a* 4·6, *b* 4·7, *c* 4·3, I 5·8, J·75, K·75.

The nasal bones of these two calvaria are broader, larger, and more prominent than those of the preceding. See Dr. Rd. KING on *Phys. Char. of Esquimaux*, Journ. of Ethnol. Soc. i. 49.

Nos. 108 and 109 from Cape Warrender, Lancaster Sound. Presented by Capt. E. A. INGLEFIELD, R.N., who obtained them in his voyage in 1853.

3. 920. Esquimaux. ♀, æt. c. 16. *Island of Igloolik*. Calv. D.C. A76, B19·7, C13·8, *a* 5, *b* 4·8, *c* 4, E6·9, F5·3*p*, *a* 4·4, *b* 4·9, *c* 4·1, G5·5, *a* 4·8, *b* 4·8, *c* 3·9, J76, K78.

4. (921.) Esquimaux. ♂, æt. c. 35. *Island of Igloolik*. Calv. D.C. A74, B20·2, C14·9, *a* 4·8, *b* 5, *c* 5·1, D14·3, E7·1, F5·4*p*, *a* 4·3, *b* 4·9, *c* 4·4, G5·5, *a* 4·8, *b* 4·9, *c* 4·2, J76, K77.

Nos. 920 and (921) are from the Museum of Joshua BROOKES, and inscribed in his autograph, "From Igloolik, an island, lat. 69° 25'. Presented by John EDWARDS, Esq., Surgeon R.N., H.M.S. 'Fury.' The Third Arctic Expedition sailed May 1821, returned October 1823.—J. B."

5. 921. Esquimaux. ♂, æt. c. 35. Calv. D.C. A69, B19·3, C14·2, *a* 4·8, *b* 4·8, *c* 4·7, D13·6, E6·8, F5*p*, *a* 4·2, *b* 4·6, *c* 4·2, G5·5, *a* 4·5, *b* 4·7, *c* 3·7, I5·1, J73, K80.

This calvarium is remarkable from having had the whole of the incisors punched out in early life.

6. 1306. Esquimaux. ♀, æt. c. 35. *Dundas Harbour*, Lancaster Sound. Calv.

B19·9, C14·9, *a* 5, *b* 5·2, *c* 4·7, D14·2, E7·1, F5·1*p*, *a* 4·3, *c* 3·8, G5·5, *a* 4·7, *b* 4·9, *c* 4·1, I5·1, J70, K77.

The coronal and sagittal sutures are almost entirely obliterated, and the middle part of the lambdoid, although the perfect state of the alveoli shows the woman was young.

Obtained by Mr. Clements R. MARKHAM from a tomb on a peninsula at the entrance of Lancaster Sound.

Average Measurements of Skulls of Esquimaux from the Eastern side of America.

4 ♂. A75, B20·2, C14·8, *a* 4·9, *b* 4·9, *c* 5, D14·2, E7·2, F5·3, *a* 4·4, *b* 4·9, *c* 4·3, G5·6, *a* 4·7, *b* 4·8, *c* 4·1, I5·4, J73, K77.

Extremes, A69–80, J72–76, K75–80.

2 ♀. A71, B19·8, C14·5, *a* 5, *b* 4·9, *c* 4·6, D14·2, E7·3, F5·2, *a* 4·3, *b* 4·7, *c* 3·8, G5·3, *a* 4·6, *b* 4·8, *c* 4, I4·9, J71, K72.

6 ♂ and ♀. A73, B20, C14·6, *a* 4·9, *b* 4·9, *c* 4·8, D14·2, E7·2, F5·2, *a* 4·3, *b* 4·8, *c* 4·5, G5·4, *a* 4·6, *b* 4·8, *c* 4·3, I5·1, J70, K75.

3. *Esquimaux of the Western side of America.*

1. 226. Esquimaux. ♀, æt. c. 50. *Port Clarence*.

A70, B20, C14·1, *a* 5·2, *b* 4·8, *c* 4·1, D13·9, E7·1, F5·5*t*, *a* 4·3, *b* 4·7, *c* 4·5, G5·3, *a* 4·7, *b* 4·7, *c* 4, H5, I5·2, J77, K74.

Prognathous, with the teeth singularly ground down to one uniform plane. Has a small "pneumatic process" on each side.

2. 227. Esquimaux. ♂, æt. e. 40. *Port Clarence*. Calv. A71, B19·8, C14, a 5, b4·5, c4·5, D14, E7, F5·3t, a4·4, b4·5, c4·1, G5·5, a4·6, b4·7, c4, I5·8, J·75, K·78.

Nos. 226 and 227 collected at Port Clarence by Dr. T. B. FOSTER, Surgeon, R.N., in the voyage of the 'Rattlesnake' in search of FRANKLIN, and presented by Dr. FOSTER.

3. 370. Esquimaux. ♂, æt. e. 50. *Cinnamarat* Tribe, Port Clarence.

A76, B20, C14·6, a4·9, b5·1, c4·6, D14·4, E7, F5·3t, a4·5, b5, c4·1, G5·6, a4·6, b4·7, c4, H4·8, I5·5, J·75, K·80.

Obtained by Jno. GRAY, Esq., Surgeon, R.N., of H.M.S. 'Trincomalee,' at Port Clarence, and presented by him.

4. 797. Esquimaux. ♂, æt. e. 60. *Cape Lisburne*.

A76, B20·5, C14·7, a5, b4·6, c5·1, D14·7, E7·2, F5·6t, a4·6, b5·2, c4·3, G5·5, a4·6, b4·8, c4·2, H4·9, I5·2, J·77, K·76.

This fine skull was procured by Dr. Berthold SEEMANN during the arctic voyage of the 'Herald,' in 1849 (*Narrative of the Voyage of H.M.S. 'Herald,'* 1845-51, by B. SEEMANN, 1853, ii. 178).

5. 946. Esquimaux. ♂, æt. e. 30. *Kotzebue Sound*. Calv. D.C.

A70, B19·7, C14, a4·6, b5, c4·4, D14, E6·9, F5·2t, a4·5, b4, c4·3, G5·3, a5, b5·1, c4, I5·4, J·75, K·76.

6. 950. Esquimaux. ♀, æt. e. 55. *Kotzebue Sound*. Calv. D.C.

A66·5, B19·6, C13·7, a4·9, b4·6, c4·2, D13·9, E6·8, F5·3t, a4·3, b4·7, c4·2, G5·4, a4·7, b4·6, c3·7, I5·4, J·78, K·79.

Has the "pneumatic process" of HYRTL on both sides of the occipital.

Nos. 946 and 950 are both inscribed, "Presented by A. COLLIE, Esq., Surgeon R.N., from Kotzebue Sound,"—probably written by Joshua BROOKES. Mr. COLLIE was Surgeon of H.M.S. 'Blossom.' See calv. from Icy Cape, MORTON's *Cran. Amer.* pl. 70. No. 4. L. CHORIS, *Voy. Pitt. autour du Monde*, Paris, 1822, fol., ii. pl. vi., vii.

Average measurements of 4 skulls of men, Esquimaux from the western side of North America. A73·2, B20, C14·3, a4·8, b4·8, c4·6, D14·2, E7, F5·3, a4·5, b4·6, c4·2, G5·4, a4·7, b4·9, c4, H4·8, I5·5, J·75, K·77.

Extremes, A70-76, J·75-77, K·76-80.

These Esquimaux crania appear to dispose themselves under three diverse types, as they are derived from Greenland or the Eastern or the Western side of North America. The first division contains the true typical Esquimaux skulls, with such

very striking and remarkable forms as to merit for them the distinction of being regarded as a *section*. They are eminently of the *pyramidal* form, many of them marked by a ridge in the position of the obliterated frontal suture, as Nos. 38, 585, 876, 877, (878), and 942. It is interesting to see this character exhibited in so young a subject as this last. They are of great length, and have unusual width of the base of the calvarium, with an uncommon flatness and breadth of face, the zygomata projecting outwards remarkably, and the nasal bones being reduced to narrow slips. The *second* division has fewer of the Esquimaux peculiarities; or they present themselves in a less prominent form. The nose rises to a tolerable height in Nos. 108 and 109. In the *third* section the crania vary a good deal, and at the same time depart still more decidedly from the true Esquimaux type. No. 797 is not very long, has a ridge along the sagittal suture, but the face is not remarkably flat, and the nose is prominent. The two calvaria from Kotzebue Sound have flatter faces and very prominent zygomata, but manifest the pyramidal form in only a slight degree. The two Port Clarence crania are prognathic, No. 226 especially so, with jaws of very wide alveolar arches. The nasal bones are longer and rather broader, but not prominent. These skulls have little of the true Esquimaux aspect; they approach nearer to the crania of some North-American Indians. The calvarium No. 227 has the flatness of face and wide-spread zygomata of the typical Esquimaux; but the pyramidal shape can hardly be distinguished in any of the three.

That the Esquimaux of the whole arctic circle are one and the same people is quite an inadmissible view, however they may have been confused by voyagers, or whatever argument may be deduced from language. Their physical peculiarities are unquestionably distinct. Esquimaux skulls have a right to be regarded as specifically different from all others. It would be a hopeless attempt to search for crania like them in European graveyards.

References.—BLUMENBACH, *Dec. Cran.* Tab. xxiv., xxv., xxxvi., xxxvii. All these skulls are of eastern tribes. MORTON, *Cran. Amer.* pl. 70. Three calvaria of eastern tribes, No. 4 from the western Icy Cape. LUCAS, *Zur organisch. Formenl.* Taf. vi. GUÉRAULT, *Mém. de la Soc. d'Anthrop.* i. pl. v. figs. i., ii. RETZIUS, *Ethnolog. Schriften*, pl. ii. fig. ii.

b. RACES OF CANADA.

675. Iroquois. *Six Nations*. ♂, æt. c. 65. A Cayuga?
A 74, B 20.2, C 14.3, a 4.8, b 5, c 4.5, D 14.2, E 7.1, F 5.4t, a 4.5,
b 4.9, c 4.2, G 5.5, a 4.6, b 4.8, c 4, H 4.4, J 76, K 77.
Dug up from an Indian burying-ground near the village of

Cayuga, on the banks of the Grand River, near Lake Erie, in 1851, by Mr. Griffith GRIFFITHS, Surgeon. In the grave were found:—*a*, an iron axe-head, or tomahawk; *b*, a portion of the bowl of a stone pipe; and, *c*, four arrow-heads of stone.

MORTON, *Cran. Amer.* Plate 35 (Cayuga).

840. Mississauga. *Algonquin*. ♀, æt. e. 70.

A 72, B 20·2, C 14·4, *a* 4·8, *b* 5, *c* 4·6, D 14·2, E 7·2, F 5·4*p*, *a* 4·4, *b* 5·1, *c* 4·4, G 5·2, *a* 4·6, *b* 4·7, *c* 4, H 4·8, I 5·4, J 7·5, K 7·2.

This skull is very characteristic, quite the model and epitome of an Indian squaw. The nose is prominent and aquiline, the frontal very receding, and the parietal tubers elevated. It was found in a cemetery on the river Humber, near Toronto, and presented by Professor Daniel WILSON, LL.D. In his *Prehistoric Man*, ii. 272, is a Table of Measurements of skulls, including those of Mississagas.

841. Algonquin. Probably ♀, of early but mature age. Imperf. calv.

A 54·5, B 18·6, C 13, *a* 4·3, *b* 3·8, *c* 4·9, D 13·4, E 6·3, F 5·2*t*, *a* 4·2, *b* 4·6, *c* 4·1, G 5·1, *a* 4·3, *b* 4·4, *c* 3·9, J 8·2, K 8·1.

1190. Algonquin. ♀, æt. e. 20. Imperfect, with lower jaw.

B 18·3, C 13, *a* 4·5, *b* 4·5, *c* 4, D 13·2, E 6·3, F 5·2*t*, *a* 4·3, *b* 4·8, *c* 3·9, G 5·1, J 8·4, K 8·1.

Nos. 841 and 1190 from Indian cemeteries near Burford. Presented by Mr. Wm. YATES.

1172. Huron. Probably ♂, æt. e. 50. Imperf. calv.

B 20·7, C 5·2, *b* 4·9, D 14·7, E 7·2, F 5·7*t*, *a* 4·7, *b* 5·1, G 5·4, *a* 4·7, *b* 4·9, *c* 4·3, J 7·9, K 7·5.

Presented by Prof. D. WILSON. From a Huron ossuary, which belonged to the period of French intercourse, the 17th century. This calvarium has received a sabre-cut; another of the series presents a bullet-wound. MORTON, *Cran. Amer.* Plate 37 (Huron); *Prehistoric Man*, ii. 291. At p. 268 there is a Table of the measurements of Huron skulls.

c. RACES OF THE NORTH-WESTERN REGIONS OF NORTH AMERICA.

1. Continental Tribes.

1263. Athabaska. ♀, æt. e. 60. *Fort Churchill*, Hudson's Bay. Calv.

A 71, B 19·7, C 14·2, *a* 5, *b* 4·7, *c* 4·5, D 14·2, E 6·4, F 5·3*p*, *a* 4·3, *b* 4·7, *c* 3·9, G 5·2, *a* 4·6, *b* 4·7, *c* 4, I 4·7, J 8·2, K 8·1.

The sutures are greatly obliterated, somewhat prematurely. The nasal bones present a form of the N.W. Indians'.

Presented by Jas. McCLELLAND, Esq., M.E.S.

373*. Thlinkith, or Kolosch. ♂, æt. e. 50. Calv.

B 22·3, C 15·8, *a* 5·7, *b* 5, *c* 5·1, D 15·9, E 7·5, F 6·3*p*, *a* 5·1, *b* 5·6, *c* 4·9, G 5·4, *a* 5·1, *b* 5·2, *c* 4·4, I 6, J 8·4, K 7·2.

This immense platycephalic calvarium exhibits marks of plastic deformation in the base, around the occipital foramen.

References.—BLUMENBACH, *Dec. Cran.* Tab. lv. G. SANDFORD, *Tab. Cran.*, "Cranium Schitgagani."

374*. Konjag. ♂, old.

B 21·7, C 15, *a* 4·9, *b* 5·2, *c* 4·9, D 16·4, E 7·2, F 6·6*p*, *a* 5, *b* 6·1, *c* 4·6, G 5·8, *a* 5·2, *b* 5·2, *c* 3·6, H 4·7, I 5·8, J 9·1, K 8·0.

This big distorted skull has a very large parieto-occipital flattening nearly 5 inches in diameter. The pressure has bulged out the temporal regions. It is from the Island of Kadjak. Both Nos. 373* and 374* were brought from Russian America by Prof. H. J. HOLMBERG (*Ethnographische Skizzen über die Völker des Russ. Amer.*, von H. J. HOLMBERG, *Acta Societ. Scient. Fennicæ*, 1856, iv. 281). Presented by the late Prof. A. RETZIUS.

Reference.—BLUMENBACH, *Dec. Cran.* Tab. lxvii.

1. 865. Shushwap. Shushwapumsh Tribe, or Atnaks¹. ♂, æt. e. 25. *Fraser River*. D.C.

A 82·5, B 20·8, C 14·3, *a* 5, *b* 4·2, *c* 5·1, D 14·5, E 7·1, F 5·9*p*, *a* 4·8, *b* 5·2, *c* 4·6, G 5·5, *a* 4·6, *b* 4·7, *c* 4·1, H 4·9, I 5·7, J 8·3, K 7·7.

The spheno-basilar synchondrosis in this fine and rare skull is not wholly ossified. Has a small "pneumatic process" of HYRTL on the left side, a triquetral bone in the left spheno-parietal suture, a small interparietal bone, and is very full in the lower occipital region; still it is male.

2. 866. Shushwap. ♀, æt. e. 25.

A 75·5, B 20·7, C 15·1, *a* 5·1, *b* 5, *c* 5, D 14·3, E 7·2, F 5·5*t*, *a* 4·5, *b* 5·2, *c* 4·5, G 5·5, *a* 4·5, *b* 4·7, *c* 4·3, H 4·3, I 5, J 7·6, K 7·6.

References.—HALE's *Ethnography of U. S. Exploring Expedition*, 1846, p. 205. HECTOR and VAUX, *Indians of Capt. PALISER's Expedition*, Trans. Ethnol. Soc. i. 260.

1. 1022. Chemesyan. Babeen, or Big Lip. ♂, æt. e. 60. D.C.

A 82, B 21·1, C 15·4, *a* 5·2, *b* 5, *c* 5·2, D 14·8, E 7·3, F 5·8*p*, *a* 4·5, *b* 5·3, *c* 4·4, G 5·5, *a* 4·9, *b* 4·9, *c* 4·4, H 5·2, I 5·9, J 7·9, K 7·5.

An exceedingly fine skull, with many sutures ossified from age.

2. 1023. Chemesyan. ♀, æt. e. 50. Calv. D.C.

A 68·5, B 19·8, C 14·2, *a* 4·9, *b* 4·9, *c* 4·4, D 13·7, E 6·9, F 5·3*t*, *a* 4·4, *b* 4·7, *c* 4·2, G 5·2, *a* 4·5, *b* 4·6, *c* 3·7, I 5·2, J 7·6, K 7·5.

¹ Ethnograph. Map of Oregon (HALE's *Ethnog. U. S. Expl. Exp.*).

3. 1024. Chemesyan. ♂, æt. c. 70. D.C.

A67, B20·5, C14·5, a5·2, b4·7, c4·6, D14·1, E7·1, F5·6p, a4·4, b5·1, c4·2, G5·2, a4·7, b4·7, c3·9, H5, I5·4, J·78, K·73.

Nos. 1022, 1023, and 1024 are from the neighbourhood of Fort Simpson, on the coast (lat. 54° 30'), N.W. America.

There is a portrait of a Chimpseyan in Dr. WILSON's *Prehistoric Man*, and a good account of these Indians and their productions in vol. ii. p. 17. SEOULER, *Journ. Ethnol. Soc.* i. 233. MORTON's Chemeseyan woman's skull has a capacity of 93 cubic inches. This is the mean of his Teutonic Family. MEIGS, *Catalogue*, p. 72.

This remarkably fine series of skulls (Nos. 865 to 1024) was presented to DEVILLE by Dr. W. F. TOLMIE, Surgeon to the Hudson's Bay Company. They appear not to have been buried; Nos. 866 and 1023 present indications of weathering or of having been scaffolded.

676*. Chenook. ♂, æt. c. 50. Calv.

B20·3, C13, a4·5, b4·2, c4·3, D13·8, E6·5, F6·3p, a5·1, b5·9, c4·3, G4·8, I5·4, J·97, K·73.

The original of this extraordinarily distorted discoid calvarium is in the Bristol Institution.

References.—MORTON, *Cran. Amer.* pl. 42, 43 (Chinouks). SEHOOLERAFT, *Indian Tribes of the United States*, part ii. pl. 59, 60 (Chenook, distorted); pl. 61 (Chenook, natural).

2. Selipsh, or Flatheads.

1. 1196. Selipsh. ♀, æt. c. 17. *Howe's Sound*, Gulf of Georgia, British Columbia, with the first three cervical vertebræ.

This fine skull of a girl, which was found with No. 1216 on a promontory in the neighbourhood of Howe's Sound, in the spring of 1863, retains the dried integuments, with the first three cervical vertebræ. It has some long, dark, coarse hair on it, among which, on the forehead and on the face, are marks of red ochre that has been used as a paint. It has also been ornamented with a kind of earrings. These consist of a hank of variegated, coarse, apparently cotton threads, tied in a knot and about 4 inches long, which are attached to the *ala* of each ear by a single thread. The threads are made of two strands, one a dark green, the other a snuff-brown colour. This skull has been distorted in the manner designated by GOSSE *tête symétrique allongée en cylindre*, like those of the ancient Peruvians and the Quatsimas (Nos. 1187 and 1188). The nasals form a beautiful example of the incurved nose, see No. 1211, which is placed on elevated processes of the superior maxillaries. This very peculiar and characteristic nose is frequently seen in CATLIN's drawings and paintings of the western tribes, as in the Flathead woman basketing salmon

(fig. 201, vol. ii. of a collection of *Original Drawings* in my possession).

Bought of a dealer in London.

2. 1216. Selipsh. ♂, æt. e. 50. *Howe's Sound*. Calv.
A71, B19·2, C14·3, a5, b4·8, c4·5, D15, E6·5, F6p, a4·5,
b5·8, c4·4, G5·4, a4·6, b5, c4·2, I5·1, J·92, K·83.

This calvarium, as the measurements declare, is greatly distorted in the usual Flathead manner. It presents a very distinct annular depression from the alisphenoids across the coronal suture, or klinocephalism. Some of the sutures are a good deal ossified.

It appears that the tribe to which Nos. 1196 and 1216 have belonged has one mode of distortion of the skull for male, and another for female infants. It has been asserted by Dr. C. B. Wood that among the Quatsimas the heads of women only are distorted. This may be correct if No. 1189 be not flattened, which is rather doubtful. I am not aware that it has ever before been observed that any tribe models the head in two different ways, according to the sex of the infant. Such certainly seems to be the case in the tribe to which the two former skulls have belonged.

Bought of a dealer (Mr. FRANKS) in Amsterdam. It is singular that Nos. 1196 and 1216 should have been obtained by me in such distant places. They both have labels on them *in the same handwriting*; and I have ascertained from Dr. Chas. FORBES that the skeletons were found in the spring of 1863, on a rocky promontory, by a Surveyor.

3. 1472. Flathead. Probably ♂, æt. e. 9.

4. 1473. Flathead. Probably ♂, æt. e. 8.

5. 1474. Flathead. Probably ♂, æt. e. 8.

Has a triangular *epactal* bone of nearly equal sides, which does not descend more than half the distance to the superior ridge of the occipital (JACQUART, *De la valeur de l'Os Épactal*). The suture on each side between the basiliary portion of the occipital and the condyloid portions is still open. In No. 1473 it is not quite ossified.

No. 1472 has been distorted to the greatest extent, and presents artificial klinocephalism from the bandage employed. The two others are much less deformed.

I do not know anything of the history of these three curious skulls, further than that I have received them from Vancouver Island. When they came to hand they were covered with moss. They have evidently been picked up in the forest; and it is probable that they present the only memorials of the sad fate of three children, most likely boys.

d. RACES OF VANCOUVER ISLAND.

1. 39. Vancouver Islander. ♂, æt. c. 20. Imperf. calv.

This curiously distorted calvarium is defective, in wanting nearly the whole of the occipital bone. It has been greatly flattened and pressed out at the sides and behind, by compression in the frontal region, in the manner of the Chenooks.

Presented by Dr. T. B. FORSTER, Ass. Surg. H.M.S. 'Rattlesnake.'

2. 678. Vancouver Islander. ♂, æt. c. 70. Calv.

A 76, B 20.2, C 14.1, *a* 4.4, *b* 4.6, *c* 5.1, D 15, E 6.9, F 5.8*t*, *a* 4.6, *b* 5.5, *c* 4.5, G 5.3, *a* 4.4, *b* 4.6, *c* 3.8, I 5.5, J .84, K .76.

Considerably distorted both before and behind, but much awry; has a large interparietal, which includes the whole of the scaly portion of the occipital. A *leaden slug* is imbedded in the centre of the right malar bone in the zygomatic space. It appears to have penetrated from before and downwards many years before death.

Presented by Mr. Howard STEWART.

3. 1211. Vancouver Islander. "Roundhead." ♂, æt. c. 17. Calv.

A 85, B 21, C 15.4, *a* 5.7, *b* 4.6, *c* 5.1, D 15.2, E 7.5, F 5.7*p*, *a* 4.9, *b* 5.4, *c* 4.4, G 5.6, *a* 4.8, *b* 4.9, *c* 4.4, I 5.3, J .76, K .74.

This large European-looking calvarium was picked up near Victoria, at a spot on the shore where northern (Roundhead) Indians, affected with small-pox, had encamped. The nasal bones form the most distinguishing feature of the calvarium, and constitute a handsome, low, incurved, aquiline nose, found only among the western tribes of the American Indians. Each nasal is of an hour-glass shape. This handsome and peculiar nose is seen in the photograph of TERESA CAPAE, an Indian woman of pure race, born at Cuzco, in Peru.

From Dr. F. W. TOLMIE.

4. 1239. Vancouver Islander. N.E. coast. ♂, æt. c. 50.

A 63, B 19.3, C 13, *a* 4.5, *b* 4, *c* 4.5, D 14.5, E 6.4, F 5.9*p*, *a* 4.5, *b* 5.5, *c* 4.5, G 5.3, *a* 4.5, *b* 4.6, *c* 3.7, H 4.2, I 5.4, J .92, K .82.

This fine example of a Flathead has been greatly distorted, and that unsymmetrically, so as to produce displeasing results. There is an immense interparietal breadth, as the measurements show, great parieto-occipital flattening, which is oblique, prognathism, and much depression of the forehead. The low frontal has a ridge in the position of the frontal suture. One most singular effect, as it appears, of artificial distortion is considerable obliquity of the *foramen magnum*. It is of an irregularly elliptical, or rather pyriform shape, with its posterior point pro-

jeeting to the left side. The long axis of the ellipse is parallel with a line passing from the right malar bone to near the middle of the left limb of the lambdoid suture. The sutures are much obliterated, so as to support the views of those who regard artificial distortion as producing synostosis.

This remarkable skull was presented by Mr. W. L. GREEN.

5. 1414. Vancouver Islander. N.W. coast. ♀, æt. e. 25. Calv. A78·5, B19·3, C14·1, a5·2, b4·9, c4, D13·7, E6·6, F5·3*t*, a4·4, b4·8, c3·9, G5·4, a4·7, b5, c4·2, I5·2, J·80, K·81.

Each parietal is grooved with ascending branches of the meningeal artery, which have passed out of the cranium in the squamous sutures.

This calvarium has been distorted in the cylindroidal manner. Although large, it appears to be that of a young woman. As already mentioned, I have ascertained that the Quatsimas distort the heads of female infants only. The name of the tribe to which this calvarium belongs is unknown; but, from the fact of its being derived from the N.W. coast, it is probable that it is either Quatsima or of an allied tribe distinguished by the same particular custom.

6. 1415. Vancouver Islander. S.W. coast. ♂, æt. e. 35. A67·5, B19·7, C14·2, a5, b5, c4·2, D13·7, E6·8, F5·3*t*, a4·4, b4·4, c4·1, G5·4, a4·3, b4·5, c4·2, H4·6, I5·5, J·77.

There is a tendency to closure of the sutures in this skull, which has been deformed in the cylindroidal manner. Both Nos. 1414 and 1415 have the elegant nasal bones I have observed in the N.W. American races.

Both presented by Dr. W. F. TOLMIE.

In the two preceding series of skulls, that from the north-western regions of America and that from Vancouver Island, the condition of the teeth well deserves notice. They are exceedingly worn down, often until the entire crown is rubbed away. The wearing is not like that observed in the jaws of the ancient Britons, which I have called molinary; but the surfaces of the whole series in both jaws—incisors, canines, and grinders—are equally rubbed down, uniformly on a level line. This serious deterioration of the teeth is seen in the Chemesyans, the Flatheads, the Bilhoolas, the Vancouver Islanders, and the Quatsimas. Dr. Daniel WILSON has attributed the extensive wearing of the teeth in the Red-River Indians to their feeding on dried salmon, which contains a great deal of sand. There is no doubt this is the true cause also in the instances before us, of tribes living on the rivers of the N.W. coast of America and of Vancouver Island—as the Bilhoolas, who have their villages on the Bilhoola or Salmon-river.

1. 1187. Quatsima. ♀, æt. c. 20. "Longhead." Quatsinough Sound, West coast, Vancouver Island. Calv.

A76, B20·2, C14·6, a4·9, b5·1, c4·6, D13·1, E7·2, F5·2t, a4·3, b4·7, c4·2, G5·1, a4, b4·7, c4·5, I5·1, J·72, K·71.

This very extraordinary calvarium of a young woman has a series of triquetral ossicles in both limbs of the coronal suture, on the left side extending to the alisphenoid.

It is artificially distorted, precisely in the same manner as the Aymara skulls from Lake Titicaca, and is an example of GOSSE's *Tête symétrique allongée en cylindre*. It shows the marks of the two folds of bandages in a depression across the middle of the frontal and another across the fore part of the parietals, with an intervening elevation just before the coronal suture, which are continued in another depression descending from the lower extremity of these, obliquely across the lower part of each parietal, and then across the middle of the occipital, between the two semicircular ridges. This mode of applying the compressing bandages is exactly the same as that represented in the diagram illustrating the mode of compression of ancient Peruvian skulls, so often repeated in MORTON's works, and in his *Catalogue (Illust. Syst. of Hum. Anatomy, 1849, p. 75)*. I am not aware whether it has been previously recognized that any of the tribes of Vancouver Island or of N.W. America adopted the ancient Aymaran mode of distortion. Dr. L. A. GOSSE considered it to be peculiar to the tribes of Bolivia. The Quatsimas are said to be the only tribe of Vancouver Island who elongate the head; hence they are called "longheads" by the Hudson's Bay employees¹. Several other tribes flatten the head, as Nos. 39, 371, 678 show.

2. 1188. Quatsima. ♀, æt. e. 50. Quatsinough Sound. Calv. A62, B19·2, C14·3, a5, b5·1, c4·2, D12·3, E7, F5·1p, a4·4, b4·4, c4·1, G5·1, a4·1, b4·7, c4·3, I5·2, J·72, K·72.

Has triquetral ossicles in each side of the coronal suture, about an inch of each extremity of the suture being ossified.

This calvarium is distorted exactly in the same manner as No. 1187, only not to the same extent. The alisphenoids only just reach the parietals in these two calvaria.

3. 1189. Quatsima. ♂, æt. 60. Quatsinough Sound. Calv. A83, B21, C14·1, a4·7, b4·3, c5·1, D14·7, E7·1, F6·1t, a4·8, b5, c4·5, G5·4, a4·5, b4·7, c4·2, I6·2, J·85, K·76.

This large calvarium (that of a man advanced in life) has a diamond-shaped interparietal, is very brachycephalic, and remarkable for its breadth, its bulged-out sides in the temporal region, and for the great projection of its superior occipital region.

It is of very much interest, since it does not present any

¹ There is, however, a very fine example of the Quo-peu-ough tribe, from Mr. T. K. LORD, in the British Museum.

decided indications of distortion, and may be regarded as probably exhibiting the natural cranial form of the tribe, and thus confirms the observation that the Quatsimas, in contradistinction to the Chenook and other Flathead tribes, confine the arts of artificial distortion to *female* infants only. No. 1189 greatly resembles No. 373* (the calvarium of the Thlinkith).

This curious and complete series of Quatsima calvaria was presented by Chas. B. Wood, M.D., who has politely informed me that he has seen many living specimens of these deformed heads in the tribe, but in *women* only.

371. Songass. Songass Tribe. ♂, æt. c. 40. Calv.
A72, B19·7, C13·6, a4·6, b4·7, c4·3, D14·4, E6·6, F5·9p, a4·7,
b5·4, c4·3, G5·2, a4·5, b4·8, c4·1, I5·4, J·89, K·78.

A very perfect example of a greatly distorted calvarium (the distortion in the occipital region is rather oblique) from Esquimault Harbour, Straits of San Juan de Fuca. Presented by Jno. Grey, Esq., Surg. H.M.S. 'Trincomalce.'

e. RACES OF THE ATLANTIC AND ADJOINING STATES.

1. 238. Delaware. ♂, æt. c. 70. Imperf. calv.

2. 239. Delaware. ♀. Imperf. calv.

These calvaria were collected by Dr. Swift, of Easton, Pennsylvania, during the cutting of a railway there, and were presented by that gentleman.

3. 1059. Lenni Lenape. ♂, of perhaps 60. Imperf. calv.
A77, B20·5, C14·3, a4·9, b5, c4·3, D14·7, E7·1, F5·6t, a4·6,
b4·9, c4·4, G5·6, a4·8, b4·9, c4, J·78, K·78.

Presents asymmetrical parieto-occipital flattening. See *Nat. Hist. Rev.* 1862, p. 297. fig. 3.



Fig. 77.—Calvarium of Lenni Lenape.—No. 1059.

Found near Delaware Gap, Pennsylvania, in 1861. The body had been buried in a crouching posture, with a pipe placed by it. Presented by Mr. Franklin Peale, Philadelphia.
MORTON, *Cran. Amer.* pl. 32 (Lenni Lenape).

4. 976. Iroquois. *Oswego*. ♀, æt. c. 35. Calv. D.C. A73, B20, C13·9, a4·6, b4·5, c4·8, D14, E7, F5·5t, a4·5, b4·7, c4·4, G5, a4·5, b4·5, c4, I5·2, J·78, K·71.

5. 1163. North-American Indian. ♂, æt. c. 20. Imperf. calv. B20·7, C14·8, a4·9, b5·2, c4·7, D14·7, E7·5, F5·5p, a4·7, b5·1, c4·3, G5·5, a4·6, b4·8, c4·2, J·73, K·73.

Tribe unknown. From the collection made by Prof. Ib ISEN, Anatomical Muscum, Copenhagen.

6. 1217. North-American Indian. ♀, æt. c. 50. A69·5, B19·9, C13·7, a4·7, b4·3, c4·7, D14·3, E6·8, F5·7p, a4·4, b5·3, c4·4, G4·6, a4·2, b4·5, c4·3, H4·5, I4·9, J·83, K·68.

Is affected with plastic deformation at the base around the great foramen, and also has the two *processus papillares* of Prof. H. J. HALBERTSMA on the basilar portion of the occipital, just before the foramen.

Of unknown origin. Bought of FRANKS of Amsterdam.

7. 1364. North-American Indian. ♂, æt. c. 40. V.L. d. J. A70, B20·8, C14·6, a4·8, b5·2, c4·6, D14·3, E7·3, F5·7t, a4·4, b4·9, c4·4, G5, a4·3, b4·6, c4·1, H5, I5·3, J·78, K·65.

This thick skull has been fractured in two places, probably during life. One fracture runs vertically downwards from the middle of the right parietal to its temporal edge; the other descends from the posterior edge of the left temporal obliquely downwards and across the articular cavity of that bone. The right zygoma has also been broken. It is a very characteristic cranium, with the low and narrow forehead and very prominent nose.

8. 1416†. Illinois. ♂, æt. c. 60. Kinderhook, Pike Co., Illinois. A78·5, B20·1, C14·5, a5, b5, c4·5, D15·3, E6·8, F5·8t, a4·6, b5·4, c4·1, G5·6, a4·8, b4·9, c4·1, H4·8, I5·6, J·85, K·82.

Very brachycephalic and hypsicephalic. The sutures of the calvarium are almost entirely effaced—the coronal, sagittal, and lambdoid.

This skeleton and the following imperfect calvarium were dug up (in 1843) by J. E. MAYALL, Esq., in an old Indian burial-ground near Kinderhook, Pike County, Illinois, North America, in N. lat. 39° 30', and W. long. 91°, on the left bank of the Mississippi, and about 70 miles south of the Mormon city of Nauvoo¹. The graves in this cemetery were placed *side by side*,

¹ It was near the same spot that the notorious Joe SMITH reported that he had dug out of a large mound some plates of copper, upon which a sort of hieroglyphies were carved. Dr. PETT, of Kinderhook, testified to the finding of the copper plates, a metal formerly much used by the North-American Indians. Mounds are numerous in that neighbourhood. These *copper* plates must not be confounded with the more famous, mysterious, *golden* plates, upon which, according to the same respectable discoverer, the "Book of Mormon" was engraved.

in rows running E. and W. With the skeleton there was an earthen vase (placed at the head), in which a rattlesnake had been deposited; of the reptile, only the bones remained. Fragments merely of this urn have been preserved, from which it appears to have been 8 or 9 inches across the top, bellying out a little below. It is unornamented, thin, and well made (by hand), and not imperfectly fired. It is a decidedly finer and harder pottery than the generality of that of the ancient Britons. The colour is mostly black, both inside and out, reddish in some places. It has had a small knob handle on one side near the thin rim, and on the opposite a small projecting flat lip. Besides this vase, there was a pipe-head of coarser pottery, a small rude flint spear-head, two bone awls, or implements for boring (made of the elbow ends of the ulnæ of an animal), and three hafts for implements (made from the antlers of a deer). Round the neck of the skeleton from which the imperfect calvarium (No. 1421) was recovered were the remains of a necklace, consisting of 70 white chalky beads, considered to have been formed out of the teeth of the Elk, and a fine bone pin nearly 9 inches long. Dr. PETIT related that some years previously an Indian hunter visited this spot, and indicated by signs and tokens that it was a sacred place, in which their greatest chiefs had been buried. He himself, from his dress and manners, appeared to be a chief, and said he had journeyed 35 days from the west to visit the burial-place of his fathers. A trapper made out by interpretation that the tribe of the strange visitor had been driven back from this district (which was regarded by them as their finest hunting-grounds) by the Sioux and other powerful tribes.

This skull is thick and heavy; save the squamous sutures, there are none open. An old but slight injury has been inflicted on the right side of the frontal bone.

Remarks on this skeleton will be found in Appendix B.

9. 1417. Illinois. ♀, of perhaps 30-40. Imperf. calv., with lower jaw.

Presented by J. E. MAYALL, Esq., who himself collected these relics.

References.—BLUMENBACH, *Dec. Cran.* Tab. ix., "Indi Amer. Septentr." (a very poor representation). G. SANDIFORT, *Tab. Cran.*, "Cran. Americani Septentr." (a remarkably fine and perfect specimen from Prof. W. E. HORNER, Phila.). MORTON, *Crania Americana*.

f. RACES OF MEXICO.

798. Comanche. ♂, æt. e. 17. *Durango*.
A70, B19·6, C13·2, a4·8, b4·7, c3·7, D14·1, E6·6, F5·7t, a4·4,
b4·8, c4·2, G5·5, a4·4, b4·6, c3·4, H4·7, I5·4, J86, K83.
Has an oval triquetral bone in the middle of the sagittal su-

ture, where the skull is very elevated from parieto-occipital flattening.

Acquired in 1850, by Dr. Berthold SEEMANN, after a contest between the Comanches and the Mexican troops (*Voy. of H.M.S. 'Herald,'* 1853, ii. 159).

601. Mexican Indian. ♂, of middle age. Calv.

A80, B20·1, C14·6, a4·9, b5·2, c4·5, D15·3, E6·8, F5·5p, a4·7, b5·2, c4·4, G5·7, a4·9, b5·1, c4, I5·2, J·80, K·83.

The nasals have been cut across the middle and are united again; and there has been an extensive cut along the middle of the right parietal. The sutures of the vertex are much obliterated.

Obtained on the eastern coast of Mexico by the Officers of H.M.S. 'Vixen.'

References.—BLUMENBACH, *Dec. Cran.* Tab. lxi. MORTON, *Cran. Amer.* pl. 16, 17, 17A, 18, 18A, 59, 60, and 61 (Ancient Mexicans). A. A. BERTHOLD, *Ueber einen Schädel aus den Gräbern der alten Paläste von Milla*, K. Leop. Carol. Akad. xix. P. ii. 1841, 4to, Taf. lxxiv. u. lxxv. GRATIOLET, *Mém. de la Soc. d'Anthrop.* i. pl. x., xi.

B. CENTRAL-AMERICAN RACES.

a. RACES OF GUATEMALA.

1. 377. Pokomame. ♂, probably aged. Imperf. calv.

B19·8, D15·3, E6·1, F6·3p, a5, b5·8, c4·5, G4·7, a4·5, b4·6, c3·7, J1·02, K·77.

The posterior half of the sagittal suture is nearly obliterated.

2. 378. Pokomame. Imperf. calv.

E5·8, F6·3p, J1·08.

These two extraordinarily deformed calvaria have been distorted by compression on the frontal, and chiefly on the occipital region, so as to raise the middle parietal region upwards and make it bulge out at the sides, producing the *tête cunéiforme bilobée* of GOSSE. It is singular that No. 378, which has undergone much the greater degree of deformation, should be an instance of premature ossification of the sagittal suture, which is totally obliterated. The other sutures are all open. It presents the *beak* of VIREHOW; and the two parietal foramina are persistent. In the synostosis of the parietals in the case of a calvarium artificially deformed in so extreme a degree and in a direction running parallel to that of the sagittal suture, it is, I believe, unique. There is not the slightest approach to scaphocephalism. J. BARNARD DAVIS, *On Synostotic Crania among Aboriginal Races of Man*, pp. 18 and 28.

These calvaria of the ancient inhabitants of Guatemala were presented by M. L'Abbé BRASSEUR DE BOURBOURG.

C. RACES OF THE ANTILLES.

1. 796. Carib. ♀, æt. e. 19. *Santo Domingo*. Calv.
A66, B19, C13·2, *a* 4·7, *b* 4·4, *c* 4·1, D13·8, E6·4, F5·5*p*, *a* 4·5,
b 5, *c* 4, G5·2, *a* 4·3, *b* 4·5, *c* 3·9, I5·2, J·86, K·81.

This is most likely an undistorted calvarium. It has a triquetral bone in each spheno-parietal suture, and HYRTL's pneumatic processes. Left outer incisor lost at an early period of life.

2. 1055. Carib. ♂, æt. e. 70. *Santo Domingo*.
A68, B19·8, C13·3, *a* 4·7, *b* 4·3, *c* 4·3, D14·8, E6·3, F5·9*t*, *a* 4·5,
b 5·3, *c* 4·7, G5·3, *a* 4·4, *b* 4·9, *c* 4·1, I5·7, J·93, K·84.

An instance of most remarkable distortion, produced by pressure in the frontal region, reducing the calvarium to a disk. It is heavy, and the posterior half of the sagittal suture is obliterated, as well as the outer portion of the coronal on the left side. The mastoid foramen on the left side is large and unusually direct. The alisphenoids reach the parietals by a small surface only.

3. 1056. Carib. ♂, æt. e. 40. *Santo Domingo*. Calv.
A71, B19·5, C13·6, *a* 4·9, *b* 4·7, *c* 4, D14·6, E6·4, F5·7*p*, *a* 4·9,
b 5·2, *c* 4·4, G5·2, *a* 4·6, *b* 4·7, *c* 3·9, I5·1, J·89, K·81.

On the left side the alisphenoid does not reach, and on the right only just reaches the parietal.

4. 1057. Carib. ♀, æt. e. 30. *Santo Domingo*. Imperf. calv.
A68, B19·4, C13·4, *a* 4·6, *b* 4·6, *c* 4·2, D14, E6·4, F5·7*t*, *a* 4·6,
b 5, *c* 4·2, G5, *a* 4·2, *b* 4·5, *c* 3·8, J·89, K·78.

5. 1058. Carib. ♀, æt. e. 16. *Santo Domingo*. Imperf. calv.
B19·2, C13·2, *a* 4·3, *b* 4, *c* 4·9, E6·5, F5·6*p*, G4·7, J·86, K·72.

6. 1166. Carib. ♀, æt. e. 30. *Santo Domingo*. Imperf. cranium.
a, the femora of a woman, 15·5 inches long; No. 1167, the femora of a man, 17·1 inches long; No. 1167*a*, a lower maxilla, with other bones.

All these relics of an extinct race (Nos. 796 to 1167*a*) were obtained from a cavern, about 15 miles S.W. of Porto Plata, Santo Domingo, near to the village of Maymon (CHARLEVOIX, *Hist. de l'Isle Espagnole*, 1733, 18mo, i. 48).

It is said the Caribs were expelled from the island early in the 17th century.

The crania are all more or less distorted in the discoidal manner—*tête cunéiforme couchée* of GOSSE. No. 1055 (a very heavy calvarium) is most completely deformed. In GOSSE, *Sur les Déform. Art. du Crâne*, pl. vi. figs. 2 and 3, the apparatus used by the Caribs of St. Vincent for distorting the head is represented. He gives the measurements of a Carib skull (p. 20).

Presented by Col. T. S. HENEKEN, of St. Domingo, who took great pains to procure them.

Referencees.—BLUMENBACH, *Dec. Cran.* Tab. x. and xx. (Caribs of St. Vincent). These exhibit two degrees of distortion, Tab. x. slight (as in No. 796), and Tab. xx. extreme (as in No. 1055). SHELDON, *Account of the Caraihs who inhabited the Antilles*, *Archæologia Americana*, 1820, i. 365. LAWRENCE, *Lect. Nat. Hist. Man*, pl. x., xi. MORTON, *Cran. Amer.* pl. 64, 65. VIMONT, *Traité de Phrén.* pl. cxv. fig. 1.

D. SOUTH-AMERICAN RACES.

a. RACES OF NUEVA GRANADA.

1. 158. Muizca¹. ♂, æt. e. 50. Cave near *Choachi*.
A73, B19·6, C13·9, a4·7, b4·5, c4·7, D15·2, E6·5, F5·7p, a4·5,
b5·1, c4·2, G5·7, a4·8, b5, c4·2, H4·4, I5·4, J·87, K·87.
Distorted.

2. 159. Muizca. ♂, æt. e. 40. *Choachi*.
A67, B19, C13·6, a4·4, b5·1, c4·1, D14·1, E6·5, F5·2t, a4·6,
b4·7, c4·1, G5·3, a4·5, b4·6, c4·1, H4·4, I5·2, J·80, K·81.
Not distorted. Has a frontal suture.

3. 160. Muizca. ♂, æt. e. 40. *Choachi*. Calv.
A75, B19·7, C14·2, a4·7, b5, c4·5, D14·4, E6·7, F5·5p, a4·6,
b5·1, c4·1, G5·5, a4·5, b4·7, c3·9, J·82, K·82.

Not distorted. The left limb of the coronal suture is ossified. All other sutures open. Deformation has not resulted from the closure of the suture.

4. 162. Muizca. ♀?, æt. e. 6. Calv.
Distorted.

5. 163. Muizca. ♂, æt. e. 18. *Choachi*. Imperf. calv.
C a4·5, b4·6, D16, F6·6p, a5, b5·8, c4·4, G a4·8, b5, J·91?

This most extraordinary specimen, which, unfortunately, wants,

¹ Of the Muizcas, Muiscas, or Chibchas, the former inhabitants of New Granada, whose principal city was Theusaquillo, now Santa Fé de Bogotá, there is a good account, translated from Coronel Joaquin Acosta, in Mr. Wm. BOLLAERT'S interesting volume (*Antiquarian, Ethnological, and other Researches in New Granada, Eeuador, Peru, and Chile*, 1860, p. 8). It is there said that Muisca means a man; from *mu*, the body, and *isca*, five, *i. e.* body of five extremities. "Chibcha may have been the name given by the Spaniards to the inhabitants from the divinity Chibchacum, to protect or support." VELEZ doubts their having called *themselves* by either of these names.

besides the lower maxilla, the occipital and the left temporal bones, the two middle incisors, both canines, the two premolars of the left side, and the right *dens sapientiae*, is in form and size undistinguishable from the celebrated Natchez skull of MORTON'S Plates 20 and 21 (*Crania Americana*), lithographed from drawings sent him by Dr. W. BYRD POWELL, of New Orleans. The wisdom-teeth are scarcely cut; and the spheno-basillary suture has been quite open.

The measures given by Dr. POWELL are phrenological. I have endeavoured to follow them thus:—

From individuality to occipital spine, *i. e.* E, 5·5 inches. (This measure is taken to the most prominent point of the occipital region remaining.)

From destructiveness to destructiveness, 5·9 inches.

From cautiousness to cautiousness, *i. e.* F, 6·6 inches.

From secretiveness to secretiveness, 6·5 inches.

From constructiveness to constructiveness, 4·7 inches.

These measurements fully bear out the exact resemblance of the two examples.

The compressing forces have been applied on the frontal before, and on the occipital behind, in directions as nearly as possible parallel to each other, and must have been very considerable, as the parietals are not only expanded laterally, but arched in the longitudinal direction of the head.

6. 296. Muizca. ♂, æt. c. 50. Jericó, Tundama. Imperf. calv.

Distorted. Retains a portion of the scalp, with some short black hair on it.

7. 297. Muizca. ♀, of considerable age. Cararé, Velez. Calv. A 71, B 19·3, C 14, *a* 4·9, *b* 4·8, *c* 4·3, D 14·5, E 6·6, F 5·4*t*, *a* 4·4, *b* 5, *c* 4·1, G 5·4, *a* 4·7, *b* 5, *c* 4·2, J·81, K·81.

Not distorted.

8. 298. Muizca. ♂, æt. c. 50. Cararé. Calv.

B 19·3, C 13·9, *a* 4·6, *b* 5·2, *c* 4·1, D 14·7, E 6·5, F 5·4*p*, *a* 4·7, *b* 5·2, *c* 3·9, G 5·3, *a* 4·5, *b* 5, *c* 4·4, J·83, K·81.

Distorted.

9. 299. Muizca. ♀, æt. c. 18. Jericó. Calv.

A 66, B 19, C 13·5, *a* 4·8, *b* 4·4, *c* 4·3, D 14, E 6·5, F 5·5*p*, *a* 4·5, *b* 5·2, *c* 4, G 5, *a* 4·4, *b* 4·5, *c* 3·7, I 5·1, J·84, K·77.

Has a wry occiput, but no other indication of distortion.

10. 300. Muizca. ♀, æt. c. 35. Jericó. Calv.

A 67, B 19·7, C 14·2, *a* 4·9, *b* 4·9, *c* 4·4, D 14, E 7·1, F 5·2*t*, *a* 4·3, *b* 4·5, *c* 4·1, G 5·3, *a* 4·5, *b* 4·6, *c* 4, I 5·4, J·73, K·74.

Not distorted. The only dolichocephalic skull of the Muizca

series. The canine on the left side has penetrated through the superior maxillary immediately below the antrum. The mastoid of the right side is as large again as that on the left.

11. 301. Muizca. ♂, æt. e. 35. *Cararé*. Calv.

A83, B20·5, C14·9, *a*5·1, *b*5, *c*4·8, D15·4, E7, F5·6*p*, *a*4·8, *b*5·3, *c*4·3, G5·7, *a*4·9, *b*5·1, *c*4, I5·5, J·80, K·81.

Distorted.

12. 302. Muizca. ♂, æt. e. 50. *Cararé*. Calv.

A72, B19·4, C14, *a*4·7, *b*4·9, *c*4·4, D14·7, E6·6, F5·6*p*, *a*4·7, *b*5·3, *c*3·9, G5·4, *a*4·5, *b*4·9, *c*4, J·84, K·81.

Distorted.

13. 303. Muizca. ♂, of great age. *Cararé*. Calv.

A67, B19·8, C13·8, *a*4·7, *b*4·8, *c*4·3, D14·6, E6·6, F5·4*p*, *a*4·6, *b*5·1, *c*4·1, G5·2, *a*4·5, *b*4·9, *c*4·3, J·81, K·78.

Distorted. All the sutures are open, but the alveoli are totally absorbed.

14. 304. Muizca. ♂, of perhaps 50. *Facatativa*. Calv.

A78, B20·2, C14·2, *a*5·2, *b*4·7, *c*4·3, D16·2, E6·2, F6·3*p*, *a*5·3, *b*6·1, *c*4·5, G5·5, *a*5·1, *b*5·3, *c*4·1, I5·5, J1·01, K·88.

The alisphenoid is wholly shut off from the parietal on the left side.

15. 305. Muizca. ♀, of advanced age. *Facatativa*. Calv.

A72, B17·8, C11·9, *a*4, *b*4·2, *c*3·7, D14·2, E5·5, F5·8*p*, *a*4·5, *b*5·3, *c*4·1, G5, *a*4·3, *b*4·4, *c*3·3, J1·06, K·90.

16. 306. Muizca. ♂, of middle age. *Facatativa*. Calv.

A64, B18·8, C12·6, *a*4·4, *b*4·6, *c*3·6, D15·3, E5·8, F6*p*, *a*5, *b*5·5, *c*4·3, G5·5, *a*4·6, *b*4·7, *c*3, I5·5, J1·03, K·94.

This series of Muizea erania was obtained and presented by Ed. W. MARK, Esq., British Consul.

17. 1240. Muizca. ♂, æt. e. 50. *Tunjuelo*.

B20·2, D14·3, E6·7, F5·9*p*, *a*4·6, *b*5·2, *c*4·4, G5·4, *a*4·7, *b*4·9, *c*3·9, H4·4, J·88, K·80.

18. 1241. Muizca. ♀, æt. e. 30. *Tunjuelo*.

B18·9, C12·7, *a*3·9, *b*4·5, *c*4·3, D13·7, E6·3, F5·5*p*, *a*4·4, *b*5, *c*4·2, G5·2, *a*4·2, *b*4·5, *c*4, H4·3, I5·2, J·87, K·82.

Both these skulls bear marks of distortion. They were obtained from the cemetery of Tunjuelo, near Bogotá, by Mr. GEO. CROWTHER.

This interesting collection of erania of Muizea Indians (the former inhabitants of Nueva Granada) presents much variety in

the fashion of distortion. Nos. 159, 160, and 300 have not been interfered with by art. No. 163 (immensely distorted) has been specially described. Nos. 304, 305, and 306 have been deformed in the same way,—viz. by pressure on the frontal and counter-pressure on the occipital bone, so as to raise up the middle region of the head and expand it at the sides: they are remarkably fine examples of this mode of deformation. Nos. 158, 296, 298, 301, 302, and 303 are distorted by pressure on the frontal, flattening that bone; in Nos. 296, 298, and 303 it is very considerably flattened: and, at the same time, they present indications of annular deformation, in a hollow channel passing across the fore part of the parietal bones. Hence it is obvious that different fashions of modifying the head by art in early infancy were prevalent in different tribes not remotely situated.

MORTON (in his Pl. 69) gives the figure of a Muizcan Mummy, but he never had any of the crania of this race in his collection.

Reference.—Ezequiel URICOECHEA, *Sobre las Antigüedades Neo-Granadinas*, 1854, 4to, Lamina ii., Cráneos Neo-Granadinos.

b. RACES OF PERU.

1. *Yunca*.

1440. *Yunca*. ♀, æt. e. 50. *Grand Chimu*. Calv.
A72, B19·6, C13·3, a4·3, b4·7, c4·3, D15·7, E5·4, F6·3p, a5·1,
b6, c4·5, G5·6, a4·7, b4·9, c3·4, I5·3, J1·16, K1·03.

This calvarium is distorted by compression in the frontal and occipital regions, so as to elevate the anterior halves of the parietals and cause them to bulge out at the sides—*Tête cunéiforme relevée* of GOSSE,—and approaches in form closely to MORTON's famous Natchez skull (*Cran. Amer.* pl. 20 and 21). It equally resembles the calvaria of Pokomames from Guatemala (Nos. 377 and 378), but most closely those of Muizcas (as Nos. 163 and 306). Like most of these extraordinary antero-posteriorly flattened calvaria, it is asymmetrical, having been more compressed on the right side of the occipital region than the left. The bones contain salt, which deliquesces in this moist climate.

The calvarium was obtained from a great cemetery near the sea, outside the walls proper of the desolate city of Chimu. All the skulls in this cemetery are substantially alike, and present the flattened occiput.

The ruins of Grand Chimu, near the city of Truxillo, in northern Peru, are said by Mr. SQUIER to be by far the most extensive he has visited on the continent. He estimates them to cover not much less than 15 square miles, which agrees with the estimate of RIVERO, three-quarters of a league, exclusive of the great squares.

2. *Quichua Races.*1. 394. *Quichua*. ♂, æt. c. 30.

A70, B19, C13·4, *a*4·5, *b*4·4, *c*3·5, D14·6, E6·4, F5·4*t*, *a*4·4, *b*5·1, *c*4·1, G5·3, *a*4·7, *b*4·7, *c*3·7, H4·6, I5·2, J·84, K·83.

Exhibits extensive parieto-occipital flattening.

2. 918. *Quichua*. ♀, of middle age. *Pachacamac*. Calv. D.C.

A62, B18·5, C13·3, *a*4·4, *b*4·6, *c*4·3, D14·7, E5·9, F5·6*p*, *a*4·5, *b*5·1, *c*4, G5·2, *a*4·5, *b*4·7, *c*3·5, I5·1, J·95, K·88.

This calvarium is an example of GOSSE's *tête déprimée par derrière*, which is usual among the crania from *Pachacamac*. It is very much awry, from the greater flattening of the *left* occipital region, and closely resembles that of MORTON's Pl. 10.

3. 919. *Quichua*. ♂, of middle age. *Pachacamac*. Calv. D.C.

A71, B19·8, C14, *a*4·9, *b*4·8, *c*4·3, D14·6, E6·8, F5·6*p*, *a*4·5, *b*5·3, *c*4·3, G5·4, *a*4·6, *b*4·7, *c*4, J·82, K·79.

A very irregular and wry calvarium, the greatest occipital depression being on the *right* side.

Nos. 918 and 919 are from the Museum of JOSHUA BROOKES, F.R.S., and were presented to him by Mr. M^cLAREN, Surg. R.N., as an autograph label testifies.

Respecting the celebrated Temple of the Sun at *Pachacamac*, see HERRERA's account, MORTON, *Cran. Amer.* p. 132.

4. 1304. *Quichua*. *Pachacamac*. ♀, æt. c. 65.

A67, B19·3, C13·7, *a*4·5, *b*4·5, *c*4·7, D14·1, E6·6, F5·5*p*, *a*4·5, *b*5·1, *c*4·3, G5·2, *a*4·5, *b*4·6, *c*4, H4·3, I5·2, J·83, K·78.

Has an *Os Incæ*. It is very heavy and is thick, the result of age, and also brachycephalic, retains the fatty matter of the bones, and had some remnants of integument upon it. It is labelled by Mr. Clements R. MARKHAM (who collected it), "Virgin of the Sun, from the Temple of *Pachacamac*"¹. CIEZA DE LEON informs us that, "in the principal Temples of the Sun the Yncas kept a great quantity of very beautiful Virgins." These were called *Mamacunas*, and are said to have lived a vestal or conventual life (*Travels*, pp. 136, 251). This virgin appears to have been a sinewy and masculine one. Her beauty and other feminine qualities cannot be vouched for. Mr. MARKHAM says, "the skull was taken by me from under a ruin, which was said to have been the Convent, at the foot of the Temple."

Reference.—VIMONT, *Traité de Phrén.* pl. cxix. fig. 1, "*Pachacamac*."

¹ The Temple of *Pachacamac*, near Lima, appears to have been dedicated, by the Ynca PACHACUTEE, to the Creator of the World (C. R. MARKHAM, *Cuzco and Lima*, 1856, pp. 15, 128).

5. 1305. Quichua. ♂, æt. e. 70. *Caxamarquilla*. Calv.
A72·5, B19·4, C14·5, a5, b4·7, c4·8, D14·9, E6·6, F5·7p, a4·7,
b5·4, c4, G5·6, a4·8, b5, c4, J·86, K·84.

Has great parieto-occipital flatness on the right side. In passing immediately from the skulls of Javans and other races of the Indian archipelago, in which this form is so common, and in which Prof. HALBERTSMA ascribes it directly to reposing on the hard surface of the ground, to the Ancient Peruvians, whose constant practice it was to deform the head by art, this strongly expressed example of obliquity of occiput might lead to a doubt whether art may not have interfered in some cases even among the Javans. Labelled by Mr. MARKHAM "Skull of a Peruvian, from the ruins of Caxamarquilla, near Lima."

3. Chinchas.

1. 1061. Chinchu. ♂, æt. perhaps 60. Calv. with scalp and dark reddish-brown hair on.

2. 1062. Chinchu. ♂, æt. perhaps 60. Calv. with scalp and similar hair on.

Both these calvaria present the *tête déprimée par derrière*. The alkali of the guano has changed the colour of the black hair.

They are derived from the Chinchu Islands¹ (where they were found in guano), and were presented by Prof. Sir J. Y. SIMPSON, M.D.

Reference.—RIVERO Y TSEHUDI, *Antigüedades Peruanas*, Atlas, 1851, fol., Lamina v., Chinchas.

4. Chauca.

1442. Chauca. ♀, of considerable age. *Pisac*. Calv.
A69, B19·3, C14, a4·5, b4·9, c4·6, D14·3, E6·7, F5·2p, a4·6,
b4·9, c4·2, G5·5, a4·6, b4·8, c3·9, I5, J·77, K·82.

The front teeth have been punched out in early life. This woman has suffered from serious disease of the frontal bone, probably the result of fracture with depression. There are two large openings on its left side, the edges of which are smoothed by absorption. This calvarium is not distorted.

It is derived from "the cave-tombs connected with the great Inca fortress of Pisac, dominating the entrance to the glorious little valley of Yucay or Voleamays, 16 miles to the west of

¹ "The large and beautiful valley of Chinchu" is described by CIEZA DE LEON in warm terms. The population was great. He alludes to the religious history of the Chinchu Indians, and does not fail to introduce "the devil," his favourite key to Peruvian superstitions; yet he attributes the destruction of the sheep in this valley to "the wars between the Christians."
—*Travels*, p. 260.

Cuzco. This cemetery is on the shelves of the stratified rock, alternate shale and sandstone, capped with limestone, on the opposite side of a deep and dark ravine from the wonderful fortress. The shale was dug out and chambers built in between the sandstone strata. Tens of thousands, probably, of the ancient dead are deposited here, and many are still preserved (desiccated). This may be taken as a *true Inca skull*, from the very heart of Inca power and dominion. I found *no deformation whatever* in skulls demonstrably of Inca origin, *i. e.* I found no skulls exhibiting artificial compression in or around Cuzco."

Nos. 1440, 1441, and 1442 are from E. Geo. SQUIER, Esq., whose notes upon them I have quoted: they were collected with his own hands in 1864, and the facts connected with each noted on the spot.

5. *Aymara Races.*

1. 228. Aymara. ♂, æt. c. 35. *Arica*.

A79, B19·8, C15·1, a5·1, b5·5, c4·5, D14·9, E6·9, F5·5*p*, a4·4, b4·9, c4, G5·4, a4·8, b5·3, c4·7, H4·5, I5·3, J·79, K·78.

2. 229. Aymara. Child, aged about 5. *Arica*. Calv.

A61, B18·9, C14, a4·4, b5·2, c4·4, D12·2, E6·6, F4·9*p*, a4·2, b4·7, c3·7, G4·6, a3·9, b4·2, c4·7, I4, J·74, K·70.

This curious calvarium is distorted in an extreme degree, and very closely resembles that of MORTON's Pl. 2. It has a large triquetral bone (*os Incae*) in the right limb of the lambdoid suture, embracing the right side of the scaly portion of the occipital.

Nos. 228 and 229 are distorted in the manner named by Dr. GOSSE, *Tête symétrique allongée en cylindre*, like the example of MORTON's *Cran. Amer.* Pl. 5. GOSSE's name imperfectly defines the deformation. The forehead has been depressed with a pad, and circular turns of a bandage made round the calvarium, so as to lengthen it, leaving ridges between the turns of the bandage, as described by MORTON. The result is an irregular, ridged elongation of the whole calvarium.

Nos. 228 and 229 presented by Dr. T. B. FORSTER, Surg. H.M.S. 'Rattlesnake.'

3. 230. Aymara. ♂, æt. e. 60. *Tacna*. Calv.

A72, B19·5, C14·5, a4·4, b5·1, c5, D15, E6·7, F5·5*p*, a4·2, b5·2, c4·6, G5·7, a4·7, b5, c4·4, I5·3, J·82, K·85.

Compressed before and behind, slightly across the parietals.

4. 231. Aymara. ♂, æt. e. 20. *Tacna*. Calv.

A71, B19·2, C14·3, a5·1, b5·4, c3·8, D13·5, E6·9, F5·5*t*, a4·2, b4·5, c4·3, G5·3, a4·5, b5·1, c4·4, I5·1, J·72, K·76.

Distorted in the cylindroidal manner.

5. 232. Aymara. ♂, æt. c. 60. *Tucna*. With atlas attached. A77, B19·9, C14·6, a4·7, b5·3, c4·6, D15, E6·9, F5·6p, a4·8, b5·2, c4·4, G5·7, a4·8, b5, c4, H4·9, I5·3, J·81, K·82.

A very interesting example of an Aymara, which has been scarcely, if at all, interfered with by art.

Nos. 230 to 232 were brought from Peru by Mr. Wm. BOLLAERT.

6. 1004. Aymara. ♂, æt. c. 7. *Ariaco*, near Guachere. D.C. A67, B18·6, C14·2, a4·9, b4·9, c4·4, D13·3, E6·4, F5p, a4, b4·6, c4, G5·1, a4·3, b5, c4·5, H3·9, I4·1, J·78, K·79.

This is a remarkably fine example of the cylindroidal compression in the highest degree, and, like No. 229, closely resembles MORTON'S Pl. 5.

7. 1005. Aymara. ♂, æt. c. 70. *Lachua*, near Moho. Calv. D.C. B19·8, C15·1, a5, b4·6, c5·5, D15·3, E6·8, F5·4p, a4·7, b5·1, c3·8, G5·9, a5, b5·1, c4·4, J·79, K·86.

Has a frontal suture and a large interparietal bone, which embraces the whole of the scaly portion of the occipital.

This calvarium is from Mojo, a very small town 12,940 feet above the sea, at the N.E. corner of Lake Titicaca.

8. 1027. Aymara. ♀, æt. 16. *Arica*. D.C. A64, B18·6, C13·4, a4·5, b4·7, c4·2, D14, E6·2, F5·4p, a4·5, b5·2, c4·1, G5·2, a4·5, b4·5, c3·7, H4·1, I4·9, J·87, K·84.

Has been only slightly compressed before and behind, and is affected with caries of the frontal and parietals.

Nos. 1004, 1005, and 1027 were brought from Peru by Mr. PENTLAND; the two latter, it is believed, are inscribed by him.

9. 1198. Aymara. ♂, æt. c. 70. *Arica*. A82, B20·5, C14·8, a4·8, b4·7, c5·3, D15·1, E7·1, F5·6t, a4·7, b5, c4·4, G5·6, a4·7, b5, c4·7, H4·6, I5·6, J·79, K·79.

Not distorted.

10. 1199. Aymara. ♀, æt. c. 50. *Arica*. B18·4, C13·8, a4·7, b4·6, c4·5, D13·6, E6·5, F5·6p, a4·2, b5, c3·8, G5·2, a4·2, b4·6, c4·1, H3·8, J·86, K·80.

Moderately distorted in the cylindroidal manner. All the upper and one of the lower incisors have been knocked out in early life¹.

¹ I have at length discovered that the custom of punching out the teeth, common to many parts of the world, prevailed among some of the Peruvian tribes. It is referred to by CIEZA DE LEON in these words, the passage having been pointed out to me by the translator:—"The people of Guanacvilcas used to pull out their teeth in each jaw, the fathers doing it to their children when of very tender age, which they thought was no evil, but rather

II. 1200. Aymara. ♂, æt. c. 30. *Pisagua*, between Arica and Iquique.

This large skull (greatly distorted cylindroidally) is derived from a tumulus. I am unable to take measurements, from the distortion. Has a twisted knot of dark-brown hair attached to the crown¹.

This and the preceding skull were saturated with a deliquescent salt, when they came into my possession, which seemed at first view to render it probable that they had been mummified, or at all events had gone through the first stage of mummification, before interment, by the same process as that used among the ancient Egyptians and the Guanches, viz. steeping the body in brine². On further inquiry, I find that nitrate of soda and other salts prevail abundantly in the soil of the Peruvian coast desert (where the atmosphere is highly desiccative), and that many of the ancient cemeteries are literally on the sea-beach, where the foam of the breakers drifts over them like clouds of light cotton.



Fig. 78.—*Cranium of an Aymara*.—No. 1200.—Quarter-size.

Nos. 1198 to 1200 presented by David FORBES, Esq., F.R.S.

a service very acceptable to their gods" (MARKHAM's *Cieza de Leon*, p. 181). This author attributes the custom to the Indians about Guayaquil, but the present example shows that it extended to some tribes much to the south of that district.

¹ This is the mode of wearing the hair mentioned by GARCILASSO DE LA VEGA, and attributed by him to the Canaris of Quito (MARKHAM's *Cieza de Leon*, p. 167).

² "None of the thousands of bodies that have been examined show any signs of having been embalmed. It seems clear that this operation was only resorted to in the case of the Yncas themselves." This is the testimony of Mr. Clements R. MARKHAM in one of the valuable notes to his excellent *Travels of PEDRO DE CIEZA DE LEON*, 1864, p. 227, where he gives an account of the obsequies of the Yncas.

1441. Colla. ♀, æt. perhaps 60. "Chulpa," northern end of *L. Titicaca*. Calv.

Λ61, B17·7, C 14, *a* 4·8, *b* 5, *c* 4·2, D14·2, E 6·1, F 5*p*, *a* 4·1, *b* 4·6, *c* 3·8, G 5·6, *a* 4·5, *b* 4·9, *c* 3·6, I 4·7, J 82, K 91.

All the front teeth have been punched out in early life. The outer extremities of the coronal suture are ossified. The calvarium is very elevated and has been deformed, as evidenced by parieto-occipital flattening.

This small calvarium is derived "from one of the 'ehulpas,' or tower-tombs, which characterize the great terrestrial basin of Lake Titicaca, the ancient 'Collas,' and are seldom found outside of it. The hill (most of these sepulchral towers are built on hills) on which this 'ehulpa' stands is about 6 miles N. of the upper end of the Lake, and about 4 from the village of Taraco. The 'ehulpas' on this hill were of stones, not cut, but broken or chipped to shape, and averaged about 12 feet in height by 4 in diameter, swelling (dome-like) toward their summits, and having an inner vaulted chamber over a kind of cist sunk in the soil. There were two other skulls in the vault (besides the one I send you) of substantially the same character. You may accept this skull as next to unique in Europe, and as belonging to 'the long-headed race,' of which perhaps the Aymaras are the descendants"¹. On reading this note from Mr. SQUIER I was led to think I had acquired a long-looked-for desideratum (a specimen of that "long-headed race" of which I had so repeatedly heard). On turning to the measurements of the calvarium it will be at once seen to be decidedly brachycephalic (J 82); hence it might be supposed, as it is "substantially of the same character" with the two others from the cist, and "a fair but not exceptional specimen," that "the long-headed race" was not distinguished by having long skulls, but by some other peculiarity. Yet this is the meaning attached to the term by those who have spoken of such a race, and who consider themselves able to discriminate it². MORTON, who regarded the Aymara race as the true "Ancient Peruvian," and who designated the Ynea Peruvians "Modern Peruvians," in the *Crania Americana* (p. 98), expressed the opinion that the skull of the former was *naturally* very much elongated. But, in a subsequent publication (*Remarks on the Ancient Peruvians*), he retracted this opinion, and acknowledged that the elongation of the skull was wholly artificial. The re-

¹ "Some of these 'chulpas' range from 40 to 60 feet high, and from 10 to 15 in diameter, containing large and niched vaults, and built of massive stones, elaborately cut and perfectly fitted." Mr. Clements MARKHAM visited those of Sillustani, on the north side of the Lake of Umayu, and has given a particular account of them, with figures (*Travels in Peru and India*, p. 111).

² To these authors Mr. SQUIER cannot be said to belong, as he uses the term "long-headed race" in a conventional sense, and distinctly expresses his dissatisfaction with the present classification of Peruvian skulls, which he considers will not stand the test of inquiry.

searches of Mr. Jno. H. BLAKE, of Boston, who collected a large series of Ancient Peruvian crania and mummified bodies from cemeteries on the shore of the Bay of Chacota, near Arica, have led him to go back to the view which MORTON retracted, and to maintain that there was a dolichocephalic as well as a brachycephalic race among the Ancient Peruvians. It is greatly to be regretted that Mr. BLAKE has not published any account of his skulls (with correct figures) upon which this opinion is based. Dr. Daniel WILSON, however (who has examined them), concurs in this opinion. It is again particularly malapropos that the figures given in his 'Prehistoric Man' (to illustrate the point) are all unequivocally *artificially* elongated. "Fig. 59 (Peruvian Dolichocephalic Skull);" "Figs. 60 and 61 (Peruvian Child's Skull, Normal)," have clearly both of them been distorted by art¹. Up to the present time there is to me something vague and mythical with respect to *the natural dolichocephalic crania of Ancient Peruvians*, just as there is also concerning the latter gentleman's *kumbecephalic* skull, as the only example of this cranium ever shown me is simply dolichocephalic, more so in consequence of premature synostosis. The calvarium No. 1441, evidently artificially abbreviated, certainly affords no additional light upon the former point. Fig. vi. of Plate V. of RETZIUS's *Ethnologische Schriften*, however, exhibits the skull of a moderately dolichocephalic Aymara, which bears no mark of distortion. RETZIUS says it was accompanied with two others, also dolichocephalic (S. 96).

References.—VIMONT, *Traité de Phrén.* pl. exvi. fig. 1. MORTON, *Cran. Amer.* pl. 1, 2, 3, 4, 5, 7, 56, 57, and 58. PRICHARD, *Phys. Res.* i. ed. 3. fig. 2. A. D'ORBIGNY, *L'Homme Américaine*, 1839, 4to, Atlas, pl. No. 1. fig. 2, No. 2, 3, and 4. Dr. F. VON BIBRA, *Die Algodon-Bay in Bolivien*, Denksehr. Mathem. Naturw. K. Acad. Wiss. Wien, Bd. iv. 1852, fol., Taf. iii. Clements R. MARKHAM, *Travels of Pedro de Cieza de Leon*, 1864: the Introduction to this volume contains a good account of the Quichuas and the Aymaras.

¹ Dr. WILSON has, in his second edition, explained that the drawings for these xylographs had been confused, and has given at p. 449, "Fig. 59 (Peruvian Dolichocephalic Skull)," which is accompanied with the assertion that "it is not at all necessary for the confirmation of the opinion (reasserted here) that there are two essentially distinct types of Peruvian crania, to affirm that the form of the elongated skull never owes any of its peculiarities to artificial compression." Still it cannot be overlooked that this Fig. 59, which we are now to regard as the genuine dolichocephalic Peruvian cranium, has been unequivocally *artificially* elongated. If Dr. WILSON's assertion that there are two distinct natural forms has solid foundation, it seems singular that an example was not selected for illustration in which there was no possibility of art having produced the dolichocephalism. Up to the present time (I say it with all possible respect to Dr. WILSON) he has not produced any evidence for the opinion recanted by MORTON, which does not admit of being ascribed to the interference of art.

6. *Charcas*.

1. 1422. *Charca*. *Lasána*, Bolivia. ♂, æt. e. 45.

A70, B19·5, C13·6, a4·7, b4·5, c4·4, D15·2, E6·2, F5·8_p, a4·8, b5·3, c4·4, G5·3, a4·6, b5, c4·2, H4·8, I5·2, J·93, K·85.

This fine and heavy skull has the first five cervical vertebræ attached to it. It has been distorted in such a manner as to depress the forehead, with counterpressure on the occiput, so as to bend the parietal bones transversely, and cause the central portions of these bones to bulge out at the sides (the "tête cunéiforme relevée" of Dr. L. A. Gosse).

2. 1423. *Charca*. *Lasána*. ♀, æt. e. 80.

A67, B18·4, C13, D14·6, E5·7, F5·8_t, a4·5, b5·3, c4·3, G5·3, a4·5, b4·8, c4, H4·3, J1·01, K·93.

This curious skull is that of an aged woman; it is nearly edentulous, and almost entirely synostotic. It has been distorted in the same manner as the last; but the distortion has proceeded to a higher degree, so as to produce greater prominence in the middle of the parietals (the "tête bilobée" of Dr. Gosse), and also to occasion the extraordinary proportions above given (J1·01, K·93). It has the first six cervical vertebræ attached to it.

3. 1424. *Charca*. *Lasána*. ♂, æt. e. 80.

A72, B18·7, C13·8, D15·8, E5·9, F6_p, a4·7, b5·9, c4·2, G5·8, a4·9, b5·1, c4·2, H4·7, J1·00, K·97.

This singular skull has been distorted in the same manner as the last, and almost to the same extent. It is in a certain sense plagiocephalic, from the parieto-occipital flattening being greater on the right side than on the left. Most of the sutures are obliterated by age. Five of the first cervical vertebræ are attached to the cranium.

4. 1425. *Charca*. *Lasána*. ♂, æt. e. 20.

B19·5, C a4·7, b5·2, D15·1, E6·8, F5·3_p, a4·6, b4·8, c4·2, G4·7, b5·1, c4·8, H4·8, I5·6, J·78.

This is the skull of a young man who appears to have been sacrificed first, and then his head has undergone some degree of preparation. He has been killed by blows upon the head made by a blunt instrument of stone, which have fractured the cranium in different places. One blow has penetrated the skull at the fore end of the sagittal suture, leaving an irregular hole nearly an inch long; another is a cut about an inch in length and a tenth wide (on the right side of the occipital). By these blows the youth has been killed, and he has then been decapitated. After which the base of the skull has been broken out, and the

brain and membranes cleanly extracted, exactly in the same manner as in the prepared heads of the Maoris.

This skull reached me in the condition of a *prepared head*, with all the integuments dried upon it. The colour of the skin was like No. 45 of BROCA'S *Tableau Chromatique*. It was covered with a profusion of long hair of a rich brown colour (No. 41 of BROCA'S Table). Among the hair were two feathers, a blue and a green one; another (longer one) was stuck in the mouth. One lock of hair had been passed through a hole in the green and pliant integuments of the neck and tied there; another had been passed through the atlas and tied in the same way.

The forehead is very low, the frontal presenting two planes at the sides and a ridge between; there are no other indications of artificial distortion, if these be such.

If there be not any distinct account of the Peruvians having practised the art of preparing heads, there are abundant proofs that the different tribes sacrificed women and "servant lads" by burying them alive (CIEZA DE LEON, p. 51), "killed women, boys, and servants to be interred in the tombs of persons of superior rank (*Id.* p. 365), prepared bodies by means of fire (*Id.* p. 64), and stuck the heads of enemies on stakes at the entrances of the houses of their Caeiques" (*Id.* p. 81). The same traveller tells us of his visiting a village near the city of Cali, in New Granada, in which was a great wooden house containing, on a long board, rows of human bodies of those defeated in war. "They were all cut open, and this is done with stone knives, after which they eat the flesh, stuff the skins with ashes, and place them on the board in such a sort as to appear like living men" (*Id.* p. 101). When describing southern Peru and the tribes nearer Cuzeo, he says they took those with whom they were at war or enmity prisoners; and "having made the prisoner drunk, the chief priest killed him with lanceets of stone or copper. They then cut off his head, and offered it, with the body, to the accursed devil, the enemy of human nature" (*Id.* p. 180). Besides this, MORTON (in the 1st Plate of the *Crania Americana*) gives a prepared head as an "Embalmed Head, from the Peruvian Cemetery at Arica," and, in his description, states that "some tribes decapitate their dead chiefs, and place the head in a box by itself." (See D. WILSON'S *Prehistoric Man*, ii. 245.)

These vastly distorted skulls are derived from the province of Charcas of CIEZA DE LEON. They are from an abandoned Indian settlement named "Lasána," at the foot of the Cordillera, nearly due E., slightly S., from Cobija, in a right line from the coast about 50 Spanish leagues, or 150 English miles.

They were presented by Aquinas RIED, M.D.

This collection of American crania shows that there have been various modes of distortion of the skull among the aboriginal

races, which were evidently not confined to particular tribes. Certain tribes have within themselves distorted the head in *different* ways; and distinct tribes have adopted the *same* mode of distortion, even when that mode was most artificial and required a very complex apparatus. As an instance of the former, I may refer to Nos. 1196 and 1216, the first of which is the skull of a woman, and is distorted in the cylindroidal manner; the other, the calvarium of a man, is distorted by a depression of the forehead. As an evidence of the latter I may refer to the Pokomames of Central America (Nos. 377 and 378), to the Muizeas (Nos. 163, 304, 305, and 306), and to the Quichua (No. 918), all of which are distorted by counterpressure on the frontal and occipital regions. I may also especially refer to the examples of cylindroidal distortion which are seen in the Quatsimas (Nos. 1187 and 1188), in the so-called Flathead (No. 1196), and in the Aymaras (Nos. 228, 229, 231, and 1004). It is singular that this most curious mode of deformation should have been practised in Europe also, as witnessed by the skulls from the Crimea, and those of the so-called Avars, found in Austria.

References.—BLUMENBACH, *Dec. Cran.* Tab. lxxv. MORTON, *Cran. Amer.* pl. 8, 9, 10, 11, 11A, 11B, 11C, 11D, 56, 57, and 58. P. F. BELLAMY, *Account of two Peruvian Mummies*, Mag. Nat. Hist. 1842, vol. x. p. 95, pl. 4. M. E. DE RIVERO y J. D. DE TSCHUDI, *Antigüedades Peruanas* (Viena, 1851), Atlas, fol., Láminas I.—VIa. Dr. EMILIO CORNALIA, *Illustrazione della Mummia Peruviana esistente nel Civico Museo di Milano*, Atti del R. Istit. Lomb. vol. ii. 1860, fol., con una tavola. L. A. GOSSE, *Sur les races anc. du Pérou*, Mém. de la Soc. d'Anthrop. i. 149. RETZIUS, *Ueber die Schädelform der Peruaner*, Ethnologische Schriften, 1864, fol., S. 94, pl. v. fig. vi.

c. RACES OF CHILE.

1. 765. Araucanian. ♂, æt. c. 60. Calv.

B 20·5, C 15, a 5, b 4·8, c 5·2, D 15·3, E 7·1, F 5·4t, a 4·5, b 4·8, c 4·6, G 5·6, a 4·7, b 5, c 4·2, I 5·5, J 76, K 78.

The nasal bones have been broken during life.

2. 766. Araucanian. ♂, æt. c. 40. Calv.

A 69, B 19·8, C 14·2, a 5·1, b 5, c 4·1, D 14·5, E 6·8, F 5·5t, a 4·7, b 4·7, c 4·1, G 5·5, a 4·7, b 4·9, c 3·7, I 5·3, J 81, K 81.

3. 767. Araucanian. ♂, æt. c. 60. Calv.

A 75, B 20·1, C 14·9, a 4·6, b 5·6, c 4·7, D 14·7, E 7, F 5·4p, a 4·5, b 5, c 4·6, G 5·8, a 4·6, b 4·9, c 4, I 5·3, J 77, K 82.

The nasal bones have been injured during life.

4. 768. Araucanian. ♂, æt. probably 60. Imperf. calv.
D15·2, E6·9, Fc4·4, G5·5, a4·8, b4·9, c3·8, K·79.

Presents the *condylus tertius* of J. F. MECKEL, in the form of a small conical process, in the median line, at the fore edge of the occipital foramen, projecting into its *lumen*. It has probably articulated with the *processus dentatus* of the second vertebra.

These 4 calvaria of Araucanian Indians are from the frontiers of Chile, and were presented by Wm. T. THOMSON, Esq.

5. 1418. Araucanian. ♂, æt. c. 55. Calv.
A85, B20·7, C14·5, a5, b5, c4·5, D15·2, E7·2, F5·8p, a4·5, b5·5, c4·6, G5·8, a4·8, b5, c4·1, I5·6, J·80, K·80.

6. 1419. Araucanian. ♂, æt. e. 35. Calv.
A73, B21, C15·2, a5, b5·2, c5, D14·6, E7·3, F5·6p, a4·6, b4·9, c4·4, G5·3, a4·8, b4·9, c4·2, I5·4, J·76, K·72.

Exhibits a tendency to ossification in the sutures. The nasal bones probably cut across in early life.

7. 1420. Araucanian. ♂, æt. e. 60. Calv.
A95, B21·5, C15·7, a5·4, b5·4, c4·9, D16·2, E7·3, F6·2p, a5·2, b5·9, c4·7, G5·7, a5·1, b5·1, c4, I5·2, J·85, K·78.

An immense megalocephalic calvarium.

8. 1421. Araucanian. ♀, æt. c. 35. Calv.
A67, B19, C13·7, a4·5, b5, c4·2, D13·8, E6·6, F5·6p, a4·3, b4·6, c4, G5·5, a4·5, b4·7, c3·7, I5·3, J·85, K·83.

These four Araucanian calvaria are derived from the very centre of the independent Indian Territory of Chile, and are probably of as unmixed blood as any that could be met with.

Average measurements of 7 skulls of Araucanian men. A79·4, B20·6, C14·9, a5, b5·2, c4·7, D15·1, E7, F5·6, a4·6, b5·1, c4·4, G5·6, a4·7, b4·9, c4, I5·3, J·80, K·80.

Extremes, A69–95, J·76–85, K·72–82.

References.—MORRISON figures three Araucanian skulls in *Cran. Amer.* (pl. 66, 67, and 68), the first two of which greatly resemble the first four calvaria, which are thick and heavy. These four have been much hacked with the swords of the Chilean soldiers.—DUMOUTIER, *Voy. au Pôle Sud, Anthropologie*, Atlas, pl. 27, pl. 47. figs. 1, 2 (cast of interior of calvarium of a man).

d. RACES OF PATAGONIA.

1426. Patagonian child. Broken skull and other remains of the dried body of a child, found in the Straits of Magellan. The child has completed its first dentition, and appears to have been about 5 years of age. The integuments have been dried on the

body, and it has been wrapped in the skin of the Guanaco, which still adheres to it in some places. Some soft fine hair (of a very light brown colour) remains on the head.

Presented by Dr. Aquinas RIED, and also Nos. 1418 to 1421.

References.—MORTON, *Cran. Amer.* pl. 13. RETZIUS, *Ethnol. Schrift.* S. 132.

e. RACES OF THE PAMPAS.

1161*. Pampas Indian of La Plata. ♂, æt. c. 40.

B19·4, C14·6, a4·7, b4·4, c5·5, D15, E6·8, F5·4p, a4·4, b5, c4·6, G5·7, a5, b5·1, c4, H4·9, I5·2, J·79, K·83.

The original is in the Carolinska Institute, and was derived from Monte Video.

Presented (with No. 1160*) by Professor VON DÜBEN.

Reference.—RETZIUS, *Ueber den Schädel eines Pampas-Indianers*, *Ethnol. Schriften*, S. 131, pl. vi. fig. vii.

f. RACES OF PARAGUAY.

1164. Paraguay Indian. ♂, æt. c. 40. Calv.

A66·5, B19·7, C14·4, a5·2, b4·6, c4·6, D14·2, E7, F5p, a4·2, b4·5, c4·4, G5·7, a4·5, b4·7, c3·9, I5·3, J·71, K·81.

A long, narrow, tall, and heavy calvarium, with strongly marked Indian features.

Obtained by Drs. MATHIESEN and ROSEN, Medical Officers of the Ship 'Galatea,' and presented to Prof. IBSEN. In exchange, from Dr. Frederick SCHMIDT of Copenhagen.

g. RACES OF THE ARGENTINE REPUBLIC.

1449. Indian of the Gran Chaco. "EL TORITO." ♂, æt. e. 35.

A83, B21·5, C15·8, D15·2, E7·6, F5·4p, a4·4, b5·1, c4·6, G6·2, a4·9, b5·3, c4·6, H5·4, I5·7, J·71, K·81.

This colossal skull owes much of its peculiarity to premature synostosis. All the intersphenoidal portion of the coronal suture is effaced, and the sagittal suture also. The lambdoid likewise is almost entirely ossified. The results of these anomalies of development are great narrowness of the calvarium and unusual height, with a carinated elevation along the region of the sagittal suture, probably also increased depression of the frontal, which is low. The teeth are in the most beautiful state, and the age appears not to be more than from 30 to 35 years. The atlas and dentata are attached to the cranium.

This is the skull of a very valiant Indian Cacique of the Gran Chaco, in the Argentine Republic, who was killed in an encounter with Santiagan troops after long fighting.

Presented by Consul THOS. J. HUTCHINSON, F.R.G.S. &c.

h. RACES OF BRAZIL.

155. Tapuia, or Tupis. ♂, æt. c. 50.

B 20·5, C 15·3, a 5·8, b 5, c 5·5, D 14·7, E 7·3, F 5·1p, a 4·4, b 5, c 4·1, G 5·9, a 4·9, b 5, c 4, H 4·9, I 5·5, J 70, K 80.

This very fine and rare specimen closely resembles the calvarium of the Paraguay Indian.

A troop of Tapuias fell upon some plantations, when soldiers were sent out and six of the Indians were shot. Five of the skulls were sent to Prof. RETZIUS; this is the sixth. The five in the Carolinska Institute (2 crania and 3 calvaria), agree perfectly with this, as does also a calvarium in the collection of the Anat. Mus. at Copenhagen.

Presented by Dr. Jonathan ABBOT, Prof. of Anat., Bahia.

References.—RETZIUS, *Ethnol. Schriften, Ueber Schädel von Guarani-Indianern aus Brasilien*, S. 112 (which contains a very careful description by this celebrated man), pl. ii. fig. iii. MARKHAM, *Trans. Ethnol. Soc.* iii. 189, "Tupis."

1160*. Botocudo. ♂, of beyond middle age.

B 20·7, C 15·8, a 5·5, b 5·5, c 4·8, D 14·8, E 7·5, F 5·5p, a 4·4, b 4·9, c 4·4, G 5·7, a 5·1, b 5·1, c 4·2, H 5, I 5·4, J 73, K 76.

The very fine dolichocephalic skull from which this cast is taken is in the collection of the Carolinska Institute at Stockholm. The incisor-teeth seem to have been injured, perhaps by the block of wood worn in the lip by this tribe. In the famous Botocudo cranium (so often figured), all the lower incisors have been lost in this way.

References.—BLUMENBACH, *Dec. Cran.* lviii. MAXIMILIAN, *Reise nach Brasilien*, 1821, Bd. ii., Vignette 1. WEBER, *Ur- u. Racen-Formen*, Tab. xxii. MORTON, *Cran. Amer.* pl. 15. BLUMENBACH, *Dec. Cran.* Tab. xlvii., Tab. xlviii. (Brazilians). C. HOUSELLE, *Descr. duor. Cranior. e gente Puriana*, Berlin, 1822, ii. Tab.

i. RACES OF GUIANA.

1. 323*. Arawacca. ♀, æt. c. 35.

B 20, C 14·3, a 5, b 4·9, c 4·4, D 14·2, E 6·9, F 5·5p, a 4·4, b 4·8, c 4·4, G 5·4, H 4·7, I 5, J 79, K 78.

The cast of a skull contained in the Anatomical Museum at Leyden. Presented by Prof. J. VAN DER HOEVEN, and included in his *Catalogus Craniorum* (p. 64). The original is in BRUGMAN'S collection, and was given to him by Dr. WÖLFING.

2. 1271. Arawaak. ♀, æt. c. 40. Calv.

A 67, B 19·4, C 13·5, a 4·5, b 4·3, c 4·7, D 13·5, E 6·7, F 5·8p, a 4·4, b 5·2, c 4·2, G 4·9, a 4·2, b 4·3, c 3·9, I 4·9, J 86, K 73.

A very brachycephalic and platycephalic calvarium, with great

interparietal breadth. It closely resembles Carib skulls, although it has not been distorted. Mr. Busk will, I believe, show, in his 'Crania Typica,' that a cranium like this may be traced among the coast-tribes almost all round the continent of America.

1265. Caribi, or Caribisi. ♀, æt. c. 60.

A60, B19, C13·2, *a*4·6, *b*5·4, *c*4·2, D13·9, E6·6, F5·2*t*, *a*4·1, *b*4·9, *c*4, G4·9, *a*4·1, *b*4·4, *c*4, H4·4, I4·6, J·78, K·74.

This small skull of a Carib woman is almost brachycephalic, is very broad in the interparietal diameter, and is wholly undistorted. The two middle upper incisors have been punched out in early life.

1. 1266. Taruma. ♀, æt. e. 70.

A59, B18·7, C13·2, D13·8, E6·5, F5·2*t*, *a*4·3, *b*4·6, *c*4·1, G4·9, *a*4·3, *b*4·4, *c*3·9, H4·2, I4·9, J·80, K·75.

This brachycephalic skull of an aged Taruma woman is of a globular form, and has flat nasals.

2. 1267. Taruma. ♀, æt. e. 35.

A69, B18·7, C13·5, *a*4·5, *b*4·5, *c*4·5, D13·5, E6·5, F5·2*t*, *a*4·1, *b*4·7, *c*3·9, G5, *a*4·2, *b*4·3, *c*3·8, H4·6, I4·8, J·80, K·77.

This brachycephalic globular skull is very like No. 1266. She was the daughter of the woman to whom the latter belonged.

3. 1268. Taruma. ♀, æt. e. 10.

A62, B18·8, C13·5, *a*4·5, *b*4·6, *c*4·4, D13·5, E6·5, F5·3*p*, *a*4·2, *b*4·9, *c*3·8, G4·8, *a*4·3, *b*4·4, *c*3·5, H3·9, I4·3, J·81, K·73.

This skull of a Taruma girl (of probably about 10 years of age), presents the same form and almost exactly the same measurements as Nos. 1266 and 1267. She was the third wife of the Taruma Chief, and died in childhood. Sir Robt. SCHOMBURGK had visited the Taruma village six years before; and the circumstances of her being very good-looking, and intended to become one of the wives of the Chief, had impressed his mind. He considered that she could not be more than 10 years of age at the time of her death. Only one of the permanent canines has been fully cut¹.

¹ Sir Robt. SCHOMBURGK himself gives a most interesting account of the mode in which he procured these three skulls (Nos. 1266, 1267, and 1268). It is printed in the 15th volume of the *Journal of the Royal Geographical Society*, and contained in his 'Journey from Watu Ticaba to the Frog Indians, and thence by the Rivers Caphiwin and Wanamu to the Pianohottos.' He says, "From what I had observed of the chieftain 'YARIMOKO' at Watu Ticaba, I was encouraged to offer him a large present if he would give his assistance for the disinterment of one of the Wapisiana skulls. I succeeded beyond expectation; and though the skull which I procured was not quite perfect, in consequence of the root of a tree having grown over it, nevertheless it was sufficiently so for the study of its form." See No. 1270.

1269. Macusi. ♂, æt. e. 45.

A77, B21·1, C14·9, a5·2, b4·8, c4·9, D14·4, E7·4, F5·5p, a4·6, b5, c4·5, G5·4, a4·6, b4·7, c4·3, H4·7, I5·7, J7·4, K7·3.

There is an entire obliteration of the sagittal suture by premature and abnormal synostosis, to which this skull owes its dolichocephalism; still it is not scaphocephalie. There is a small parietal foramen on the left side. The coronal suture and the sutures around the left alisphenoid are also partially ossified. The skull is klinocephalie.

1270. Wapisiana. ♂, e. 60. Imp. calv., with lower jaw.

A66·5, B19·4, C13·9, a4·6, b4·5, c4·8, D14·4, E6·8, F5·2p, a4·3, b4·7, c4·3, G5·1, a4·4, b4·6, c4·3, J7·6, K7·5.

The sex of this globular calvarium is somewhat doubtful.

This Wapisiana skull is the first Sir R. SCHOMBURGK obtained from the Taruma Chief "YARIMOKO," and is imperfect "in consequence of the root of a tree having grown over it" (*Journ. R. G. S.* xv. 46).

"This success emboldened me to put the question to the Barokoto, who, to my astonishment, entered immediately into the proposal, and observed that, if handsomely paid, he would give me the skulls of his mother-in-law and of two of his former wives, the elder of whom I had known on my former journey. He came this morning (July 5th) and requested that, while he should go for the skulls, I would remain at the place, to avoid suspicion. He accordingly started, with Mr. GOODALL (my coxswain) and the interpreter, to the site of the former settlement, and commenced digging where his former hut stood, and soon exposed the bones of the younger of the two (No. 1268). Judging from the skull and teeth, she could not have been more than ten years of age when she died, and, as YARIMOKO told me, she had never recovered after giving birth to her first child. The elder (No. 1267) was buried close to her; and Mr. GOODALL relates that he appeared rather affected at seeing her remains, and told him that she had been a very good wife, who had always seen that his comforts were provided for. She was buried in a bark canoe, and with her was deposited a bottle and drinking-cup. On inquiry, he told Mr. GOODALL that she had herself requested it, that she might not suffer thirst while proceeding to the other world; the bottle still contained some water. In the grave of the younger were some glass beads and a few articles of dress. Next to her was the grave of her mother (No. 1266) and of her young child. Near the remains of the child was lying a looking-glass and a broken cutlass, and near those of an old woman were some glass beads. The child must have been very young, as the skull was broken up, and could not be removed. The other three were, however, in good order. As ready as YARIMOKO appeared to part with the members of his own family, he could not be induced to show Mr. GOODALL and his party a grave where a man was buried. The former he considered his property in life and death, but over the remains of an individual who was not connected with him by the ties of blood or marriage he considered he had no right" (p. 46).

The Expedition from which this passage is quoted is full of curious information, much of it relating to the Guayana Indians. It will be of interest to add that Sir Robert measured a number of Maopityan, or Frog Indians, and found the stature of the men to average 5 feet 6 inches, that of the women 4 feet 10 inches.

1272. Indian of Guiana, tribe unknown. ♀, æt. e. 60. Calv. A63, B19·1, C13·2, *a*4·5, *b*4·5, *c*4·2, D13·7, E6·5, F5·4*p*, *a*4·3, *b*4·9, *c*3·9, G4·8, *a*4·2, *b*4·4, *c*3·9, I4·9, J·83, K·73.

Inscribed "This is the head of a Buck, alias an aborigine of Guiana, 1840." The natives have the name of "Bucks" applied to them throughout the colony.

It is unfortunate that this series of rare skulls from Guiana should be almost all those of women. They are small, and agree generally in form to a singular extent. In this remark may be included not only the Carib, the Tarumas, the Wapisiana, both the Arawaaks, and this No. 1272, but also the Caribs from Santo Domingo (Nos. 796, 1055, 1056, 1057, 1058, 1166), the Indian of the Orinoco (No. 977), an undistorted Carib ♀ calvarium (No. 5406), and a fine Macusi ♂ skull (No. 5405), both in the Museum of the Royal College of Surgeons of England.

1278*. Carabisi. Mask of the face of a man with slight moustache.

1279*. Carabisi. "Franeiseo." Mask of the face of an older man.

1280*. Carabisi. Mask of the face of a man.

1281*. Carabisi. Mask of the face of a woman.

1282*. Carabisi. Mask of the face of a man with perceptible moustache.

1283*. Wapisiana. "Tamánuá." Mask of the face (coloured). Has a small round hole in the centre, below the edge of the under lip. The coarse straight hair coming down over half of the forehead is well seen.

1284*. Wapisiana. "Mollar." Mask of the face. Exhibits short moustache, dark hairs of which remain attached to the plaster.

1285*. Wapisiana. Mask of the face of a man.

1286*. Macusi. "Mandé." Mask of the face of a man (coloured) apparently without even any moustache. Has a round hole in the under lip.

1287*. Macusi. "Curusi." Mask of the face of a man with a slight moustache.

1288*. Macusi. "Cumeru." Mask of the face of a young man. Has dark hair of the head in the plaster still.

1289*. Macusi. "Misserai." Mask of a young man.

1290*. Macusi. "Tewuituwee." Mask of a man.

1291*. Macusi. "Essetamaipu." Mask of a man.

1292*. Pravihana. "Sororeng." Mask of a man (coloured).

1293*. Arecuna. "Tanuí." Mask of the face of a man. Has a small round hole in lower lip.

1294*. Arecuna. "Awaeaiyu." Mask of the face of a man.

In these masks it is worthy of observation that there are frequent indications of a sparse, short moustache, but none of beard. The hairs of the moustaches, eyelashes, eyebrows, and head (all dark or black) are sometimes retained in the plaster. This shows that the patients have been subjected in moulding the face to a somewhat severe process, which has torn out a number of their hairs. These have been again torn out in making the casts from the moulds.

1295*. Cast of the hand of a Guiana Indian, which is rather small. Thumb slender, nails well formed.

1296*. Cast of the foot of a Guiana Indian, which is not small. Extreme length 10·5 inches. The toes gape.

These casts appear to have been made by R. S. HEAGAN (who designates himself "Phrenologist"), in 1843.

This collection of skulls and masks of the Indians of Guiana was formed by the late Sir Robert H. SCHOMBURGK, during his second journey in that country.

Presented by the late Sir Robert H. SCHOMBURGK and his cousin Henry SCHOMBURGK, Esq.

j. RACES OF VENEZUELA.

977. Indian of the Orinoco. ♂, æt. e. 50. Calv. D.C.
A 77, B 20·4, C 13·9, a 4·8, b 4·5, c 4·6, D 14·5, E 6·8, F 6t, a 5·1,
b 5·3, c 4·5, G 5·2, a 4·5, b 4·5, c 3·8, I 5·6, J 88, K 76.

References.—BLUMENBACH, *Dec. Cran.* Tab. xlv. CUVIER, *Règne Animal*, par MILNE-EDWARDS, pl. i. fig. ii.

[Omitted in RACES OF THE NORTH-WESTERN REGIONS OF NORTH AMERICA, at p. 228.]

3. Bilhoolas.

1. 1212. Bilhoola. *Belhoula*¹. "QUIOSTIJUICE." ♂, æt. e. 40.
A 76, B 19·9, C 14·2, a 4·8, b 4·7, c 4·7, D 14·8, E 6·6, F 5·6t, a 4·7,
b 5·3, c 4·2, G 5·6, a 4·4, b 5, c 4·2, H 5, I 5·7, J 84, K 84.

This fine Flathead skull does not present any very obvious marks of distortion, although it has probably been compressed in the frontal region. It is flat in the frontal and wide in the

¹ N.W. America, on Bentinck Arm (N. lat. 52°). In the map to D. G. F. MACDONALD'S *British Columbia* is the Belahoula, or Salmon-River, at this spot, and a village designated "Village of Rascals (Belhoula)."

interparietal and intertemporal regions. It is prognathous, not as in the African crania, but with a face sloping evenly downwards and forwards to the chin, with an exceedingly low forehead. The alisphenoids have only a limited junction with the parietals, an appearance noted particularly in Africans and in all savage tribes. This, no doubt, depends on a defective development of the anterior lobes of the brain, especially of their convolutions.

It is related that "QUIOSTIRUCEE was a war-chief of the Bilhoolas, and was attacked with small-pox. Feeling deeply distressed by the sudden death of his favourite wife, he assembled his friends, stated his will, divided his property, and announced his intention to commit suicide, which he soon after effected by shooting himself."

When this and the following skull reached me, they had on them the dried integuments and a good deal of lank, straight, coarse, very dark hair. This one had one of the ear-ornaments described under No. 1196 (a bunch of threads suspended from the lobe of the right ear). In this case the threads are woollen, and appear to be derived from red bunting.

2. (1212.) Bilhoola. ♂, æt. c. 30, with first four cervical vertebræ. A77·5, B19·9, C13·7, *a*4·9, *b*4·4, *c*4·4, D14·7, E6·5, F5·9*p*, *a*4·5, *b*5·2, *c*4·5, G5·2, *a*4·6, *b*5, *c*4·4, H4·3, I5·6, J·90, K·80.

It has been a good deal distorted, in the Flathead or Chinook mode. Like the preceding, it presents old scars of injuries on the forehead. Its age is difficult to decide. From the wisdom-teeth being very little worn, it is in all probability young. It is very synostotic. The outer portions of the coronal suture, all the sagittal, and a great part of the lambdoid are ossified.

V. AUSTRALIAN RACES.

A. RACES OF AUSTRALIA.

1. 13. Australian of *Adelaide Tribe*. ♂, of middle age. Imperf. calv.

A70, B21·2, C15, *a*5·5, *b*5, *c*4·5, D14, E7·7, F5·4*t*, *a*4·4, *b*4·7, *c*4·4, G5, *a*4·6, *b*4·5, *c*4·6, J·70, K·64.

There is a triquetral between the alisphenoid and parietal on the right side. Has a small frontal sinus.

2. 14. *Australian of Adelaide Tribe.* ♂, of middle age. Imperf. calv.

A 66, B 19·8, C 14·3, D 13·8, E 7·1, F 5·t, a 4·3, b 4·2, c 4·1, G 5·3, a 4·4, b 4·4, c 3·7, J·70, K·74.

Bears marks of injury received during life on the middle of the left parietal. Has a small frontal sinus on the left side, and probably on the right also.

3. 338. *Australian of Adelaide Tribe.* ♀, of middle age. Imperf. calv.

A 62, B 20, C 14·6, a 5·1, b 5·1, c 4·4, D 13·6, E 7·2, F 5·2t, a 4·3, b 4·7, c 4·3, G 4·7, a 4·4, b 4·4, c 4, J·72, K·65.

Bears traces of injuries on both parietals. The spheno-parietal sutures are absent. Has a small "pneumatic process" on the right side, and small frontal sinuses.

4. 339. *Australian of Adelaide Tribe.* ♀, of middle age. Imperf. calv.

B 19·6, C 14·1, a 5, D 13·6, E 7, F 5·2p, a 4·2, b 4·9, c 4·2, G 4·9, a 4·3, b 4·3, c 3·7, J·74, K·70.

Has frontal sinuses.

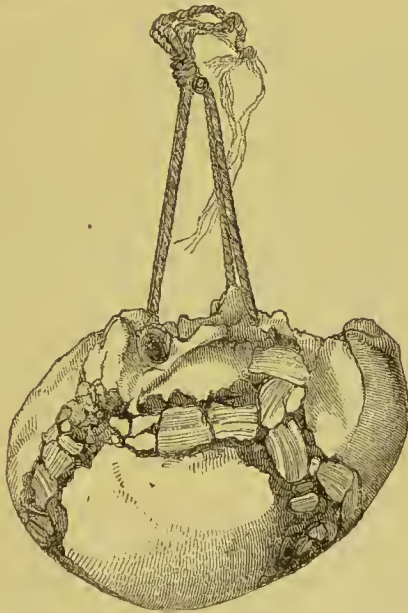


Fig. 79.—*Calvarium of an Australian Woman, prepared for a water-vessel.*—No. 339.—Quarter-size.

These four very small (yet thick and heavy) dolichocephalic calvaria present peculiarities in their measurements. The frontal and occipital breadths are often the same. Sometimes this equality is seen in their heights also. Sometimes the parietal height is exceeded by both frontal and occipital. These obser-

vations tend to show that it is the *middle region* of the brain which fails most in development. The great frontal lengths are to be attributed to their monstrous supranasal bosses. In Nos. 14, 338, and 339 the external auditory foramina are unusually large.

They have all been used as vessels to carry water in, prepared for that purpose by the closure of the sutures with fragments of the shell of the native oyster, attached by means of the resin of the gum-tree (*Eucalyptus*), and furnished with cords for the convenience of holding. These cords are passed through the occipital foramen and the hole made for drinking at by breaking away the orbital plates, the ethmoid, and the body of the sphenoid. In No. 338 the cord is made of a few fibres of native grass, in No. 339 of a string made of two carefully twisted strands of a native fibre, and in the others of pieces of old European rope. In No. 339 a wisp of native grass has been introduced into the calvarium, to prevent the motion and slopping of the water when carried. It is related by travellers that the father's calvarium becomes a heirloom to be utilized by his son.

The statement I have made respecting the neat cord with two strands is, I see, confirmed in EYRE'S *Central Australia*, ii. 311 (where there is a figure of one of the cranial water-vessels), pl. iv. fig. 20. G. F. ANGAS, *South Australia Illustrated*, fol., 1846, pl. xxvii. fig. 25.

In the Derby Museum there is one of these Australian cranial water-vessels, in which the *frontal* suture is present.

5. 340. Australian of *Adelaide Tribe*. ♀, æt. e. 17. Calv. A74, B 20, C 14·6, a 5, b 5, c 4·6, D 14·3, E 7·1, F 5·5t, a 4·6, b 4·8, c 4·3, G 5·3, a 4·5, b 4·6, c 4, I 4·9, J 77, K 74.

Nos. 13 to 340 were presented by Mr. Matthew MOORHOUSE, Protector of Aborigines, South Australia. The last exhibits almost entirely a European conformation, although Mr. MOORHOUSE regarded the authenticity of its origin as unquestionable. The great obliquity of the internasal suture confirms this. These cranial drinking-vessels are now rare objects, as the tribe which prepared and used them is extinct, or nearly so.

6. 99. Australian of *South Australia*. ♂, æt. e. 50. Calv. A 69, B 20, C 14·3, a 4·9, b 5·1, c 4·3, D 14·5, E 7, F 5·6t, a 4·4, b 4·7, c 4·3, G 5·4, a 4·7, b 4·6, c 3·9, I 5·2, J 80, K 77.

The supranasal boss is large, but the frontal sinus is absent. Has a large sword-cut on the left parietal, which has sliced off the bone (probably during life) to one-half its thickness.

7. 671. Australian of *Melbourne Tribe*. ♂, æt. e. 25. A 64, B 19·2, C 14·1, a 4·6, b 5·1, c 4·4, D 14·2, E 6·8, F 5·2p, a 4·4, b 5, c 4·3, G 5·5, a 4·4, b 4·4, c 3·8, H 4·8, I 5, J 68, K 80.

This young man died of phthisis in the Melbourne Hospital;

hence he is believed to have been of a tribe near Melbourne, in Victoria. The skull is small, prognathous, but of good form, and has a slight mark of injury on the frontal.

Presented by C. P. LAYARD, Esq.

8. 776. Australian. *Lake Timboon*, Victoria. ♀, æt. e. 16. Calv. Has triquetral bones in the spheno-parietal sutures.

9. 777. Australian. *Lake Timboon*. ♀, æt. e. 25.

A62, B19·1, C14·2, *a* 5, *b* 4·8, *c* 4·4, D13·5, E6·9, F5·1*p*, *a* 4·1, *b* 4·8, *c* 3·9, G5·3, *a* 4·4, *b* 4·5, *c* 4, H4, I4·8, J·73, K·76.

10. 778. Australian. *Lake Timboon*. ♂, aged. Imperf. calv. A59, B19·7, C14·2, *a* 4·8, D13·8, E7, F5·3*p*, *a* 4·4, *b* 5, *c* 4·3, G5·2, *a* 4·6, *b* 4·6, *c* 3·9, J·75, K·74.

Very large and thick, with large supranasal boss. Has a mark of old injury on the frontal, and small frontal sinuses.

Nos. 776 to 778 are from a cemetery on the shores of Lake Timboon, about 80 miles from Geelong. They had been buried in a sitting posture.

Presented by W. TOLSON, Esq.

11. 900. Australian of *New South Wales*. "MALGOEY BOB." ♂, æt. e. 35. D.C.

A66, B20·5, C15, *a* 5·6, *b* 5, *c* 4·4, D14·3, E7·4, F5·4*p*, *a* 4·5, *b* 5, *c* 4·4, G5·3, *a* 4·8, *b* 4·5, *c* 3·9, H4·8, I5·4, J·73, K·71.

This remarkable skull of "MALGOEY BOB," a well-known character in the colony, but whose history unfortunately I do not possess, has a frightful supranasal and supraeiliary ridge, projecting over the vast orbits, the deep cheek-depressions, and prognathous jaws, like a penthouse. The internasal suture is quite oblique, which renders the two bones very unequal. The two upper wise-teeth have each had three discrete fangs. He has had the upper inner incisor on the right side punched out in the rites of "initiation"¹; and his skull has numerous marks of old injuries on the frontal, and of extensive caries on the surface of the right parietal.

12. (915.) Australian. ♀, æt. e. 17.

D.C.

A55, B18·7, C13·5, *a* 4·8, *b* 4·6, *c* 4·1, D13·2, E6·6, F4·9*p*, *a* 4·1, *b* 4·5, *c* 4·3, G5·1, *a* 4·4, *b* 4·2, *c* 3·5, H4·1, I5, J·74, K·77.

This small cranium is synostotic from premature obliteration of the sagittal suture, which has not materially changed its form. It cannot be denominated *scaphocephalic* at all. It exhibits marks of old injuries on the frontal, parietal, and occipital bones, and has no spheno-parietal sutures. From BROOKES's Museum.

¹ On this ceremony see Dumont d'URVILLE's *Voyage de l'Astrolabe*, i. 425, where there is a curious plate illustrating it.

13. 916. Australian. *New South Wales*. ♂, æt. c. 35. Calv. D.C.
A66, B20·4, C15, a5·2, b5·5, c4·3, D14·5, E7·3, F5·5p, a4·5,
b5·2, c4·2, G5·4, a4·6, b4·6, c3·9, I5·3, J·75, K·74.

Very thick and heavy, and has no spheno-parietal sutures.

Inscribed in BROOKES's autograph, "Brought from N. Holland by Major MORRISON and presented by Dr. Henry DAVIES."

14. 917. Australian. ♂, æt. c. 40. D.C.
A61, B19·5, C13·7, a4·8, b4·5, c4·4, D13·4, E7, F5·3p, a4·3,
b4·5, c4·4, G5, a4·3, b4·4, c3·9, H4·4, I5, J·75, K·71.

The alisphenoids only just reach the parietals. Old injuries are perceived on the frontal and parietal bones, and the middle front teeth have been punched out in "initiation." Also from BROOKES's collection.

15. 931. Australian. ♀, æt. c. 25. Calv. D.C.
A71, B20·4, C15·5, a5·2, b5·6, c4·7, D14·2, E7·4, F5·2p, a4·3,
b4·8, c3·9, G5·5, a4·6, b4·6, c3·9, I5, J·70, K·74.

The right *dens sapientiæ* has had three discrete fangs, the left only one. The left inner incisor has been knocked out in early life.

16. 1021. Australian. "CARBON WILL." ♂, æt. c. 40. *Moreton Bay, N.S.W.* D.C.

A60, B20·1, C15·1, a5·3, b5, c4·8, D13·8, E7·3, F5·1p, a4·2,
b4·5, c4·2, G5·5, a4·5, b4·6, c4, H4·2, I5·2, J·70, K·75.

A small, dolichocephalie, and remarkably thick and heavy skull of feminine aspect, in which the left alisphenoid is wholly cut off from the parietals. It has old marks of serious injuries on the frontal and left parietal. Left upper wise-tooth lost, its socket presenting three discrete fangs. It is inscribed "CARBON WILL, Chief of the Moreton Bay Tribe, N.S.W., supposed to be the man who killed Capt. LOGAN, the Commandant, by spearing him."

17. 1060. Australian. ♂, æt. c. 50. *Gobo Island, Bass Strait, Victoria*.

A86, B21·7, C16·1, a5·3, b5·7, c5·1, D15·4, E7·8, F5·6p, a4·7,
b5·2, c4·2, G5·8, a5, b5·1, c4·5, H4·3, J·71, K·74.

A very fine skull of extraordinary capacity and dimensions, in the calvarium greatly resembling that of an Esquimaux.

Presented by Mr. Geo. ROLFE, Melbourne.

18. 1122. Australian. *McLeay River, N.S.W.* ♂, æt. c. 50.
A73, B21·8, C16·7, a5·6, b5·9, c5·2, D12·2, E8·3, F4·8t, a4·4,
b4·2, c4·2, G5·3, a5·1, b4·6, c4·2, H4·3, I5·1, J·57, K·63.

This very remarkable scaphocephalie skull forms the basis of a memoir (*On Synostotic Crania among Aboriginal Races of Man*,

by Joseph Barnard DAVIS, M.D.) read before the Dutch Society of Sciences of Haarlem, and printed, with "Additions" and eleven 4to Plates of natural size, in the *Transactions* of the Society, 1865. Pl. I. is a Profile View, Pl. II. a Face View, and Pl. III. a Back View of this eranium.

"This synostotic eranium presents an example of a curious custom which prevails among many of the tribes of Australians, to mark the period of puberty of the young men and to sanction their admission into the manly state and privileges. The practice is to punch out one of the incisor-teeth of the upper mandible (on the left side). In some instances this operation has not been done quite so cleverly as in this, whether from want of expertness in the operator, or from the refractory behaviour of the sufferer. In the skull of a man of the Piecaninny Creek Tribe, in the Colony of Victoria (No. 1142), the two upper incisors and the canine also of the left side have all been punched out, doubtless to the great dismay of the youthful aspirant.

"This singular eranium (which would be designated *scaphocephalic* by VON BAER and WELCKER, and *sphenocephalic* by VIREHOW and LUEAE) exhibits no indication of a sagittal suture, either within or without, and has no parietal tuberosities; on the contrary, the parietals present a large flat-arched surface, as it were compressed, which is pretty equable, and they unite together in a narrow arch, which is ridged in the centre. These bones are very long, and exhibit the large surface for the attachment of the erotaphite muscle, terminating in the semicircular line at a great elevation, which is common to the Australian race. The bone is thick at the vertical edge, scabrous on the surface, and covered with vascular pores, among which the two *foramina parietalia* (one on each side) occupy their usual places, about the junction of the middle with the posterior third of the surface, another being seen on the left side, about the junction of the middle with the anterior third. There is no trace whatever of any radiation of bony fibres from a common centre of ossification. The frontal and occipital bones are both narrow, especially the latter, although the measurements do not exhibit this. The former presents an indication of an injury during life, an appearance which is frequent among the skulls of Australians. The frontal bone is much more elevated and prominent than in the normal skull, the form of the face in the latter being prognathous, whilst in the former it is as it were orthognathous. The occipital also bulges out in its upper portion, while the lower is horizontal below the tuberosity. The compensatory development has in this case been predominantly directed forwards, so as to produce fulness in the frontal region and great elevation about the coronal suture, from which point the vertex slopes downwards towards the occiput. The parietal *carina* or ridge is prolonged to the middle of the frontal and to the upper

part of the occipital. The coronal suture does not take its usual course, obliquely entering the parietals on each side to a central point, but eneroaches much more on the frontal bone in the whole of the middle part of the skull. It does not present any central process or distinct beak of the parietal (*Schnebbe*), such as VIREHOW describes. On the contrary, the united parietals terminate in this suture with a blunt irregular projection, much more distinct on the right side than the left. The *right* squamous suture of this cranium is entirely obliterated, this side of the calvarium in the temporal region being slightly flatter than the left. All the other sutures are distinct. The sphenoparietal sutures are very short" (p. 14).

19. 1123. Australian. *McLeay River, N.S.W.* ♂, æt. e. 50.
A74, B20·3, C14·5, a5·1, b5·2, c4·2, D14·6, E7·2, F5·4t, a4·4,
b5·1, c4·2, G5·5, a4·6, b4·7, c4·1, H4·9, I5·6, J·75, K·76.

This skull is of great interest, as it presents the *normal* form in the same tribe of a man of about the same age as No. 1122. It is described in the above memoir, and figured in profile (Pl. IV.).

Nos. 1122 and 1123 *purchased* of the Commissioners for the New South Wales Department of the International Exhibition of 1862.

20. 1142. Australian. *Piccaninny Creek Tribe.* ♂, æt. ult. 50.
A74, B20·9, C15·2, a5·4, b5, c4·8, D14·4, E7·6, F5·2p, a4·4,
b4·8, c4·5, G5·5, a4·8, b4·8, c4·2, H4·8, I5·7, J·68, K·72.

The two upper incisors and the canine on the left side have been punched out in "initiation."

This man was killed by the Aborigines in 1853. Presented by the Commissioners of the Victoria Department of the International Exhibition, 1862.

21. 1195. Australian. *Queensland.* ♂, æt. e. 40.
A60, B20, C14·9, a5·1, b5·3, c4·5, D13·5, E7·2, F5·1t, a4·1,
b4·7, c4, G5·4, a4·4, b4·5, c3·9, H4·5, I5, J·70, K·75.

Thick and heavy. The coronal suture is obliterated at the sides, and the sagittal in the foraminal region, where one parietal foramen still remains in the line of the suture, thus affording some confirmation to the position of Prof. WELCKER, that these foramina necessitate a suture. Two of the lower molars are carious.

From the collection formed by Mr. A. WATSON in Queensland.

22. 1261†. Australian. *South Australia.* ♀, æt. e. 35.
A61, B19·6, C13·8, a4·8, b4·7, c4·3, D13·2, E7·1, F5t, a4·2,
b4·8, c4·1, G5, a4·3, b4·4, c3·7, H4·1, I5·1, J·70, K·70.

The middle portion of the lambdoid suture, and most of the

sagittal, is ossified, somewhat prematurely. There is a long fontanel bone in the left spleno-parietal suture; the right is reduced to a mere point. One of the lower molars is carious. The teeth in both jaws are much worn down on a level plane, like those of Esquimaux.

This skull is an excellent exemplification of Australian peculiarities, and most decidedly opposes the depreciators of cranio-logical science. The superficial portions of the brain are very imperfectly developed in the race, and this gives rise to all their marked properties. Hence they have been rendered, by nature, utterly devoid of the power to receive that which is designated "civilization" by Europeans, *i. e.* an extraneous and heterogeneous cultivation, for which they have no taste or fitness, but which has to be thrust upon them by the high hand of presumed philanthropy, and under the influences of which their own proper endowments are constantly injured, and they themselves are inevitably destroyed. The calvarium is long, no less than 7.1 inches; yet the low arch from the nasal suture to the posterior edge of the occipital foramen is only 13.8 inches in extent, proving the want of elevation in the frontal and parietal regions; the supra-occipital is decidedly prominent. The lowness and narrowness of the two regions named is seen in the very inferior heights of these regions (*Ga* 4.3, *b* 4.4), and equally inferior widths (*Fa* 4.2, *b* 4.8), which are quite remarkable measurements, as well as *D* 13.2.

23. 1262†. Australian. *South Australia*. ♂, æt. e. 22.

A 65, B 20.1, C 14.6, *a* 5, *b* 5, *c* 4.6, *D* 13.3, *E* 7.1, *F* 5.3*p*, *a* 4.3, *b* 4.9, *c* 4, *G* 5.2, *a* 4.3, *b* 4.4, *c* 3.9, *H* 4.5, *I* 4.9, *J* 7.4, *K* 7.3.

The teeth of this young man are unusually fresh and perfect.

These two fine skeletons were presented by Mr. M. MOORHOUSE and his son Mr. Jas. MOORHOUSE, of South Australia. They will be further described in Appendix B.

(Australian. *Victoria Tribe*. ♂, æt. e. 40.

A 72, B 21.2, C 14.3, *a* 5, *b* 5, *c* 4.3, *D* 13.9, *E* 7.7, *F* 5.2, *a* 4.5, *b* 4.3, *c* 3.8, *G* 5.1, *a* 4.5, *b* 4.5, *c* 4.2, *H* 5, *I* 5.6, *J* 6.7, *K* 6.6.

The sagittal suture is wholly obliterated, there being one parietal foramen; and the coronal is ossified in all its middle portion between the *lineæ semicirculares*. It is a good example of scaphocephalism, with a carina running from the fore part of the frontal to the very protuberant supra-occipital.

This curious skull was found in 1863, in the fork of a tree, a situation in which some tribes dispose of the dead. The cranium had been prepared for being deposited in this place; for a portion of bone at one side of the foramen magnum has been cut out for the extraction of the brain.

This skull was lent me by Mr. L. N. FOWLER, the Phrenologist.)

24. 1365. Australian. ♂, æt. e. 35. V.L. d. J.
 A69·5, B19·7, C14·4, a5·3, b5, c4·1, D13·9, E7·1, F4·9p, a4·2,
 b4·4, c4, G5, a4·4, b4·4, c3·9, H4·3, I5, J·69, K·71.

This is a very feminine-looking skull, still unequivocally that of a man. It is remarkably thin for its race, yet is much affected with synostosis—a fact which might be thought to be somewhat at variance with the notion that races which are distinguished for exuberance of ossification are most prone to synostosis of the cranial bones. The right squamous suture is perfectly ossified and obliterated; so also is the left speno-frontal. The right speno-frontal and speno-squamous are still open; but the coronal, especially at the sides, is greatly ossified. The sagittal and lambdoid are only partially ossified. These changes have produced a long narrow calvarium of a somewhat scaphocephalic form. The upper middle incisor of the right side has been punched out in the ceremony of "initiation." The face is very prognathous, a quality considerably heightened by the cheek-depressions, which form very deep pits. The alisphenoids appear to have only touched the parietals.

This remarkable skull was collected by Prof. REINWARDT.

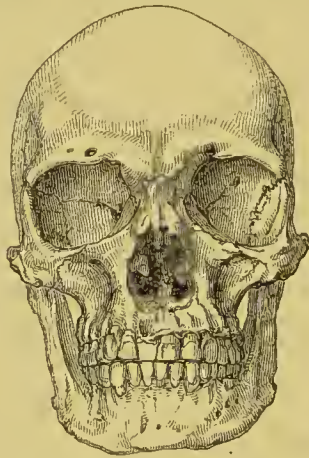


Fig. 80.—*Cranium of an Australian Man.*—No. 1365.—*Quarter-size.*

The magnitude of the supranasal and supraciliary ridges in the skulls of Australians is greatly dependent upon age and sex, as are the cranial crests of the anthropomorphous apes. They are considerable in Nos. 778 and 916, but largest in No. 900; in Nos. 917, 1060, and 1142, only of moderate size. In Nos. 671, 1021, and in all the skulls of women, they are absent. The frequent failure of the alisphenoids to reach the parietals is remarkable, and is intimately connected with the defective development of the anterior lobes of the brain. In some of the lower mammalia there exists a speno-parietal suture. The arrested development of the brain in Australians appears to be in the upper part of the hemispheres (in the anterior and middle regions).

Average Measurements of Skulls of Australians.

12 ♂. A66·2, B20·1, C14·7, *a*5, *b*5, *c*4·5, D14, E7·2, F5·2, *a*4·3, *b*5, *c*4·2, G5·3, *a*4·5, *b*4·5, *c*3·9, H4·5, I5·2, J·72, K·73.

Extremes, A59–86, J·68–75, K·71–80.

3 ♀. A64, B19·7, C14·5, *a*5, *b*5, *c*4·4, D13·6, E7·1, F5·1, *a*4·2, *b*4·8, *c*3·9, G5·2, *a*4·4, *b*4·5, *c*3·8, H4, I4·9, J·71, K·73.

Extremes, A61–71, J·70–73, K·70–76.

15 ♂ and ♀. A65·1, B19·9, C14·6, *a*5, *b*5, *c*4·4, D13·8, E7·1, F5·1, *a*4·2, *b*4·9, *c*4, G5·2, *a*4·4, *b*4·5, *c*3·8, H4·2, I5, J·71, K·73.

All dolichocephalic.

References.—BLUMENBACH, *Dec. Cran.* Tab. xxvii., xl. VIMONT, *Traité de Phrén.* pl. exix. fig. 2. G. SANDIFORT, *Tab. Cran.*, "Cran. Ineolae Nov. Cambro-Brit. Meridionalis." PRIEHDARD, *Phys. Res.* ed. 3. vol. i. fig. 7. DUMOUTIER, *Voy. au Pôle Sud, Anthropologie*, pl. 35. fig. 1, 2, 5, 6. LUDWIG BEEKER, *Report on the Aborigines, Victoria*, 1859, Plate, Natives (metamorphosed) and Skulls. J. C. LUGAE, *Schädel von Austral-Negern, verglichen mit den Schädeln von Europäern und dem eines Papua*, mit zwölf Taf., Abhandl. d. Senekenb. Gesellsch. iii. Bd. 1861. AL. BEEKER, *Zur Kenntniss der Eingebornen Südaustraliens*, Berichte d. naturf. Ges. z. Freiburg, ii. Bd., Table of Skeleton and Table of Skulls. RETZIUS, *Ethnol. Schriften*, pl. ii. fig. vi. WILHELM KEFERSTEIN, *Bemerkungen über das Skelet eines Australiers*, mit 2 Taf., 4to, 1865.

B. RACES OF VAN DIEMEN'S LAND.

1. 860. Tasmanian. ♂, of middle age. Calv. D.C.
A60, B19·9, C14·5, *a*5·2, *b*5, *c*4·3, D14·1, E7·1, F5·4_p, *a*4·4, *b*5, *c*4·2, G5·2, *a*4·5, *b*4·6, *c*4, J·76, K·73.

The alisphenoid only touches the parietal on the left side, and is cut off from it by a triquetral bone on the right. Has marks of old injuries. The roots of the molars have been of great magnitude, which, Prof. OWEN has pointed out, is a character of Australians.

2. 861. Tasmanian. ♂, æt. e. 25 vel 30. Calv. D.C.
A70, B21, C15, *a*4·9, *b*5·5, *c*4·6, D14·2, E7·5, F5·5_p, *a*4·6, *b*5·2, *c*4·3, G5·5, *a*4·7, *b*4·8, *c*4, J·73, K·73.

Very thick and heavy. Has been exposed to the fire.

3. 862. Tasmanian. ♀, æt. e. 20. Calv. D.C.
A61, B19·7, C14·1, a4·9, b5·1, c4·1, D13·7, E7, F5·3p, a4·1,
b5, c4·2, G5·3, a4·3, b4·5, c3·9, I5·1, J·75, K·75.

The left squamous suture is ossified, the right rather less so. Has the very large teeth so much commented on by Prof. OWEN.

4. 863. Tasmanian. ♀, æt. e. 30. Calv. D.C.
A68, B19·7, C14·4, a4·8, b5·3, c4·3, D14·2, E7, F5·3p, a4·5,
b5, c4·3, G5·6, a4·5, b4·7, c3·9, I5·1, J·75, K·80.

Nos. 861 to 863 are from BROOKES's Museum, and are inscribed in his autograph, "From Van Diemen's Land, Mr. GOODWIN, Surgeon, R.N."

5. 867. Tasmanian. ♂, æt. e. 30. Calv. D.C.
A66, B20·6, C14·9, a5·2, b5·2, c4·5, D14·5, E7·4, F5·5p, a4·5,
b5·3, c4·3, G5·4, a4·7, b4·8, c4·1, I5·2, J·74, K·73.

Exceedingly thick and heavy.

Said, in DEVILLE's *Catalogue*, to be from Dr. GREIG.

6. 928. Tasmanian. ♂, æt. e. 35. D.C.
A75, B21·3, C15·7, a5·6, b5·4, c4·7, D14·5, E7·8, F5·6p, a4·6,
b5·1, c4·6, G5·5, a4·8, b4·8, c4·2, H4·5, J·71, K·70.

This large and ponderous prognathous skull, with prominent supranasal boss, belonged to a native of Van Diemen's Land, who was considered to have murdered two shepherds attached to the family of Mr. ESPIE, Surgeon, and was at last shot by one of their overseers. It was presented to DEVILLE by Mr. ESPIE.

The spheno-parietal sutures are extremely short. It bears marks of injuries inflicted during life on the frontal and parietal bones, and has been exposed to fire, but subsequently buried. It was a practice amongst almost all the tribes of Tasmania to burn the dead, which renders their remains so scarce. Even where the body was not at once purposely burned, the result was the same; for a chief's body, if it may be said that they had chiefs, was sometimes placed in a hollow tree in a standing position, with a number of spears and clubs put beside it, and the opening closed up; or the body was doubled up and placed on its haunches, and wood piled round it as a protection. In both cases the first bush-fire destroyed the human remains. This is one of the finest examples in any collection of a cranium of a people so nearly extinct, although the nasals and zygomatic arches are broken off and all the front teeth are wanting.

7. 1054. Tasmanian. ♂, of good age. Imperf. calv.
A72, B20·5, C14·9, a5, b5·4, c4·5, D14·4, E7·4, F5·5p, a4·7,
b5·1, c4·2, G5·5, a4·6, b4·8, c4, J·74, K·74.

The wisdom-teeth have had three discrete fangs each. Has a

Wormian ossicle in the sutures of the alisphenoid on both sides, and has been injured by fire.

Purchased of Mr. J. S. PROUT.

8. 1119. Tasmanian. ♀, æt. e. 16. Calv. *

A63, B19·3, C14, *a* 4·7, *b* 4·9, *c* 4·4, D13·5, E6·8, F5·3*p*, *a* 4·2, *b* 4·8, *c* 4, G5·1, *a* 4·4, *b* 4·5, *c* 3·8, J·77, K·74.

This calvarium has also had some portions of the outer table burnt off.

Found in the bush at Racecourse, Surrey Hills, on the N.W. side of the island.

9. 1120. Tasmanian. ♀, æt. e. 30.

A64, B19·5, C13·8, *a* 4·8, D13·5, E6·8, F5·3*p*, *a* 4·3, *b* 4·8, *c* 4, G5·3, *a* 4·5, *b* 4·5, *c* 4, H4, I5·3, J·78, K·78.

Found at St. Mary's. An Aboriginal lad told Dr. MILLIGAN that his party, some years before, had been fired into by a white man, when a woman was injured, had her head chopped off, and was buried. Years afterwards Dr. M. took the boy to the spot and found the body in the bush. There are marks of the cutting off of the head. Both mastoids and the styloid processes are cut off; and there are notches cut in both external and internal pterygoid processes, on both sides.

The calvarium is synostotic. The sagittal suture, all the lambdoid above the *additamenta*, the middle of the coronal, and the right speno-frontal and speno-parietal are quite obliterated. Still no particular deformation has resulted, except a little shortening of the calvarium.

10. 1120*a*. Tasmanian. Fragment of calvarium, consisting of frontal and right parietal bones. They are small but thick. Probably ♀. Has no frontal sinuses.

This fragment, with the atlas and dentata and the right half of the lower maxilla, was picked up on the north coast of the island, at a spot at which, long before, a white man had fired into an encampment and wounded a woman. Her head was chopped off and she was buried in the sand.

11. 1121. Tasmanian. ♂, æt. e. 24.

A70, B20·4, C14·7, *a* 5, *b* 5, *c* 4·7, D14·4, E7·3, F5·3*p*, *a* 4·4, *b* 4·9, *c* 4·3, G5·5, *a* 4·7, *b* 4·8, *c* 4, H4·4, I5·1, J·72, K·75.

The portions of the coronal suture in the temporal regions are ossified, as well as the sutures round the alisphenoids. There is a supernumerary tooth, with a conical crown like a canine, behind the middle upper incisors. There are marks of old and severe injuries on the left side of the frontal and on the right parietal. The cranium is quite perfect, with all the teeth *in situ*; these

are of extraordinary magnitude. This specimen is probably unrivalled by any in other collections¹.

Nos. 1119 to 1121 were obtained from Dr. Joseph MILLIGAN, Protector of the Aborigines.

Nos. 1120 and 1121 are figured in Prof. Busk's *Crania Typica*, Pl.

12. 1297. Tasmanian. ♂, æt. c. 40.

A78, B 21, C15·2, a5·2, b5·3, c4·7, D14·6, E7·4, F5·6p, a4·5, b5·4, c4·5, G5·3, a4·6, b4·7, c4·2, H4·3, I5·4, J·75, K·71.

The complex serrations of the middle of each side of the coronal suture, so common in Negro skulls, are seen in this; the alisphenoids scarcely do more than touch the parietals; both appearances are connected with the elongated growth of the brain, and its want of elevation in the frontal region. The upper third molars have perished, and the alveoli are effaced; there are still five carious teeth present, viz. the lower third and second, and the right upper second, molars. The teeth are large.

¹ "The possessions of the Van Diemen's Land Company, situated exclusively in the north-west quarter of Tasmania, amounted to 350,000 acres. It was in the dense forest and the comparatively little-known tracts of unoccupied land comprised in this extensive location and its vicinity, that the residuary survivors of several of the aboriginal tribes of the island found their last insecure shelter, and a precarious subsistence, against the encroachments of the then rapidly increasing population of Europeans. From these secluded recesses they might and did from time to time issue in small but wary and determined bands, to wreak indiscriminate vengeance on such unfortunate individuals, or weak and defenceless parties of the intruding race, as accident threw into their power, or stratagem and duplicity on their part induced in an evil hour to yield to their confidence. Thus it was that, about 1830, Capt. THOMAS, brother of the then Colonial Treasurer, and a settler near the mouth of the river Mersey, together with his overseer, were, after a series of acts of kindness and consideration to the aborigines, treacherously seized by them when unawares and barbarously murdered—by the individual aborigines who had oft experienced their kindness and partaken of their hospitality.

"In the month of July 1831, a hut-keeper and night-shepherd in the service of the Van Diemen's Land Company was found dead at Tapsly Station on the Surry Hills, speared in many places and his head dreadfully beaten with the waddies of the aborigines. Other individuals in the service of the Company were speared and severely wounded (but, with one other exception, they escaped with their lives) on various occasions during July and August 1831.

"On the 1st or 2nd of September of the same year, a man in charge of a shepherd's hut, at a Station on the Surry Hills, named the Racecourse (a large area of perfectly clear and level ground), the property of the Company, aware that the aborigines were still prowling about in that neighbourhood, after the shepherd had gone out, gun in hand, as was customary and requisite for safety, locked himself in the hut. He cooked his breakfast, put the interior of the hut into order, and with door and windows secured threw himself on the bed and fell asleep. He shortly awoke and started up, under the alarming impression of a dream that the hut was attacked by natives. A loaded gun stood by him for defence; and in the walls of the hut were a few port-holes to enable him to reconnoitre the open ground and approaches to the station. Influenced by his dream, he looked through these holes, and to his great horror observed a number of 'Blacks' stealthily making their way

This fine specimen was presented by Geo. A. ROBINSON, Esq., the most enterprising and devoted friend to this just extinct race.



Fig. 81.—*Cranium of a Tasmanian Man.*—No. 1297.—*Quarter-size.*

Although the Australian and Tasmanian Aborigines have been placed in countries so near to each other, by acute observation essential differences have always been to be perceived between them. In the osseous skeleton these may not be very apparent; in the physiognomy they are distinctly seen, but perhaps can with difficulty be described. The diversity of feature may probably be resolved into a rounding off in every direction in the head of the Tasmanian, which distinguishes him from every other race. I believe the colour of the two races is different; unquestionably the hair is quite different.

towards the settlement. Penetrated with a dread of the danger which threatened him, his eye remained fixed on the warily approaching enemy. His gun was in his hand; and the circumstances animated him, not with courage, but a desperate resolution to do all he could to save his life. The aborigines stole up to about a gun-shot from the house, where they halted; and their leader crept round the sheep-yard and fence and suddenly stood erect within a few paces of the horror-stricken hut-keeper, with his head, chest, and left arm fully exposed to view against the corner of a stable wall, beckoning with his hand to encourage his tribe to follow him. The beleaguered inmate felt intensely the critical nature of the moment, and, having only one course open to him, pulled the trigger, and a charge of slugs or buckshot was lodged in the region of his 'black' assailant's heart. One loud unearthly yell, one tremendous spring from the ground, the intended victim heard and saw, and then sank down petrified and benumbed with the horror of his position.

"The shepherd on his return, some hours afterwards, found the dead native outside, and the scared hut-keeper scarcely more alive in the interior of the hut. It was evident that the followers of the 'black' leader, probably suspecting an ambush, and solely anxious for their own safety, had precipitately withdrawn, without venturing to ascertain the condition and fate of their chief, whose silence was to them probably more expressive than any other proof they could have had of his lot; for they were a people of few words, but of rapid and correct instincts. The chief's head was red with ochre, and his woolly hair hung in long strings round his face and over his temples and neck, all thickly matted with ochreous grease. His chest was deeply and symmetrically tattooed with long scars."—J. M.

Average Measurements of Tasmanian Skulls.

6 ♂. A70, B20·6, C14·9, a5·1, b5·2, c4·5, D14·3, E7·4, F5·4, a4·5, b5·1, c4·3, G5·4, a4·6, b4·7, c4, H4·3, I5·2, J·73, K·73.

Extremes, A60-78, J·71-76, K·70-75.

4 ♀. A64, B19·5, C14, a4·8, b5·1, c4·2, D13·7, E6·9, F5·3, a4·2, b4·9, c4·1, G5·3, a4·4, b4·5, c3·9, H4, I5·1, J·76, K·76.

Extremes, A61-68, J·75-78, K·74-80.

10 ♂ and ♀. A67, B20, C14·4, a4·9, b5·1, c4·3, D14, E7·2, F5·3, a4·3, b5, c4·2, G5·3, a4·5, b4·6, c3·9, H4·1, I5·1, J·73, K·73.

All are dolichocephalic.

References.—PRICHARD, *Phys. Res.* ed. 3. vol. i. fig. 6. W. C. L. MARTIN, *Nat. Hist. Mammif. Anim. with Phys. Hist. Man*, 1841, p. 310. This first and only volume of a projected large work contains a number of beautiful woodcuts of skulls and of portraits of different races, executed with great delicacy from the designs of William HARVEY. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 36. ROBT. KNOX, *The Races of Men*, p. 269, given in his careless manner as an *Australian* at p. 127. OWEN, *Descrip. Cat. Osteological Series in Mus. R. Coll. Surgeons, Engl.* p. 826, Nos. 5320 to 5328.

VI. OCEANIC RACES¹.

A. RACES OF THE INDIAN ARCHIPELAGO.

a. RACES OF THE NICOBAR ISLANDS.

1165. Nicobar Islander. *Island of Teressa*. ♂, æt. c. 40.
A65, B19·3, C14·2, a4·8, b5·2, c4·2, D14·1, E6·7, F5·2p, a4·3, b4·9, c3·8, G5·3, a4·5, b4·7, c3·8, H4·1, I4·9, J·77, K·79.

The glenoid cavity of the left temporal and the corresponding

¹ In this division the term Oceanic is employed in a larger sense than usual, so as to include the people of all the islands in the Indian and Pacific Oceans. BALBI, however, embraced these countries and Australia also in his "Océanie" (*Abrégé de Géographie*, 1833).

condyle of the lower maxilla exhibit disease. The calvarium is very thick, and the lower jaw also. The nasal bones flat. Teeth stained. This skull is extremely like those of the Andaman Islanders (R. OWEN, *On the Psychological and Physical Characters of the Mincopies*, Two fine Plates of Skull, Rep. Brit. Assoc. 1861, p. 241).

Dr. MATHIESEN, of the corvette 'Galatea,' in her circumnavigation, 1845-47, brought the late Prof. Ib IBSEN, of Copenhagen, a series of crania from the Nicobar Islands, of which this is one. Procured, in exchange, from Dr. Frederiek SCHMITT. IBSEN gave some account of these skulls, in which he said they were of oval form and approached those of "Austral negroes" (*Förhandlingar ved de Skandinaviske Naturforskarnes sjette Møte*, 1851, pp. 12, 418; *Verzeichniss ethnographischer u. anthropologischer Gegenstände gesammelt während der Erdumseglungs-Expedition der "Novara,"* Triest. 1860, S. 24, Nos. *395, 396). See an interesting account of the Nicobar Islanders by Dr. Karl SCHERZER (*Reise der Novara um die Erde*, 1861, ii. 79), where there are figures of the islanders.

In entering upon what are usually designated the *Malay* or *Malayan Races*, it will be useful to state distinctly that the denomination *Malays* is not a commensurate term. The Malay Races, as usually understood, are a group of nations for convenience arranged under this generic name, BLUMENBACH's "*Malay Variety*. Tawny-coloured:"—*badius*, bay-coloured, of an endless variety of shades: "hair black, soft, curly, thick, and plentiful; head moderately narrowed; forehead slightly swelling; nose full, rather wide, as it were diffuse, end thick; mouth large; upper jaw somewhat prominent," but yet the parts of the face, when beheld in profile, sufficiently projecting and distinct among themselves. A number of very different and distinct people were included by BLUMENBACH under his "*Malay Variety*," and it seems to be the same also with the latest writer upon the subject (CRAWFORD's *Malay Dict.* i, xv). The term Malays, on the other hand, is employed as the name of a separate people, a very enterprising and maritime people, who are discriminated by speaking the Malay *language*, and from whom BLUMENBACH obtained his name of Malay Variety. This language, having most resemblance to that of Java, is entirely different from the other tongues of the Indian Archipelago. The Malays, who speak it, are considered to be derived from the interior plain of Mânangkabau, in the island of Sumatra. They are of a roving and commercial disposition; hence they have spread into every region of the Archipelago, and settled on the coasts of all the islands. At the same time it must be recollected that they have everywhere mixed more or less with each distinct race of islanders. The skulls of Malays in this collection are placed under the different islands from which they have been derived—as No. 326 from

Rhio, No. 1369 from Banca, Nos. 1431 and 1438 from Sumatra. VAN DER HOEVEN describes 16 skulls of Malay men in his *Catalogus* (p. 26) and 4 of Malay women (p. 36), and Prof. W. VROLIK others in his *Catalogue* (p. 85).

b. RACES OF THE ISLAND OF NIAS¹.

1. 1428. Nian. "Roko." ♂, æt. c. 35.

A61·5, B19, C14·3, a 5·1, b 5·1, c 4·1, D14, E6·7, F4·9p, a 4·1, b 4·5, c 3·9, G 5·2, a 4·7, b 4·6, c 3·7, H 4·4, I 5, J·73, K·77.

Extensively synostotic; thick and heavy. There is no trace of the sagittal suture whatever; yet both parietal foramina exist. No indications of earina or scaphocephalism. The lambdoid suture is greatly ossified; the coronal almost wholly obliterated, as well as the speno-frontal and -parietal. The only tolerably free sutures are the squamous and the speno-squamous. The result is *kli-nocephalism* and *microcephalism*, from the simultaneous ossification of so many sutures. The upper front teeth have been filed down to a great extent.

2. 1429. Nian. "TAGAITO." ♀, æt. c. 60.

A72, B19·9, C14·7, c 5, D14·3, E 6·9, F5·5t, a 4·4, b 4·8, c 4·1, G 5·2, a 4·6, b 4·8, c 4·2, H 4·2, I 5·1, J·79, K·75.

The sutures of this skull also are much obliterated, apparently by age, as the form of the skull is scarcely interfered with.

3. 1430. Nian. ♂, æt. c. 6.

A71·5, B19·1, C14·4, a 4·9, b 5·1, c 4·4, D13·5, E6·8, F5·3p, a 4·2, b 5·2, c 3·8, G 5, a 4·5, b 4·5, c 3·9, H 3·6, I 4·1, J·77, K·73.

Capacious skull of a child of a *Nian* father and *Malayan* mother, of Sumatra.

Presented by Dr. BROEKMEIJER.

c. RACES OF THE ISLAND OF SUMATRA.

1. 271. Sumatran. *Palembang*. ♂, æt. c. 30.

A69, B19·2, C13·5, a 4·5, b 4·8, c 4·2, D14·4, E6·7, F5·3p, a 4·3, b 4·9, c 4·2, G 5·4, a 4·3, b 4·7, c 3·9, H 4·5, I 5, J·79, K·80.

The upper front teeth are rubbed down on the front surface.

2. 272. Sumatran. *Lampong*. ♂, æt. c. 25.

A68, B19·2, C13·8, a 5, b 4·3, c 4·5, D14·1, E 6·5, F5·4p, a 4·3, b 4·7, c 4, G 5·4, a 4·5, b 4·6, c 3·8, H 4·5, I 5·2, J·83, K·83.

3. 273. Sumatran. "TOENDAN." ♂, æt. c. 35. A sailor. *Djambie*.

A72, B19·4, C14·7, a 5, b 5·5, c 4·2, D14·3, E 6·7, F5·3t, a 4·2, b 4·6, c 4·1, G 5·7, a 4·6, b 4·8, c 3·9, H 4·8, I 5·1, J·79, K·85.

On the left side there is a triquetral ossicle in the speno-

¹ On the western shore of Sumatra, towards its northern end.

parietal suture; on the right the parietal only just touches the alisphenoid. The betel-stained upper incisors have had their crowns rubbed down level with pumice-stone.

4. 1367. Sumatran. ♂, æt. e. 40. *Bonjol*. V.L. d. J.

A67, B19·8, C14, a4·8, b4·8, c4·4, D13·9, E7, F5·1p, a4·1, b4·4, c4, G5·3, a4·5, b4·6, c3·8, H4·5, I5·1, J·72, K·75.

Soldier from Bonjol, in Sumatra. Front teeth have been rubbed down.

1431. Malay. ♂, æt. e. 25. *Mantheling*.

A87, B20·7, C14·8, a4·8, b5·7, c4·3, D14·9, E7·2, F5·6p, a4·8, b5·2, c4·3, G5·5, a4·7, b4·9, c4·2, H4·6, I5·4, J·77, K·76.

A skull of considerable size. The lower front teeth have been rubbed down into their medullary cavities; the upper front teeth also have been rubbed down on their edges, and, besides, a deep groove has been filed into their anterior surfaces, so deep as to pass *through* their medullary cavities and terminate in the posterior half thickness of the teeth. Notwithstanding this frightful havoc, there is no sign of caries. As in all these skulls, the teeth are stained with betel.

5. 1433. Sumatran. BATAK, or BATTALANDER. *Toba*. ♂, æt. e. 35.

A82, B20·7, C14·5, a5, b4·8, c4·7, D14·3, E7·2, F5·6t, a4·8, b4·9, c4, G5·4, a4·6, b4·6, c4, H4·9, I5·5, J·77, K·75.

Both upper and lower teeth have been rubbed down on the edges. It may here be mentioned that pumice-stone is the usual material employed in this filing process. Where chipping has been practised, an ordinary knife may be the instrument employed. Has a long triquetral bone in the spheno-parietal and squamous sutures of the right side.

This fine skull is a very rare specimen of a singular race inhabiting the narrow portion of the island of Sumatra. The Bataks are a numerous and *civilized* people, having various arts, alphabetic writing, and a literature written on palm-leaves and slips of bamboo. Yet, at the same time, they are well-known to have been *cannibals* ever since Sumatra was first visited by Europeans.

Reference.—JUNGHUHN, *Die Battaländer auf Sumatra*, Berlin, 1847.

6. 1434. Sumatran. ♂, æt. e. 40.

A83, B20·3, C14·7, a4·8, b5·2, c4·7, D15·3, E6·9, F5·6p, a4·7, b5·4, c4·1, G5·5, a4·7, b4·8, c4·1, H4·6, I5·3, J·81, K·79.

Has a frontal suture and (on the left side) one of the *processus papillares* of Prof. HALBERTSMA, one form of the *condylus tertius*. The alisphenoid is cut off from the parietal on both sides; on

the left by triquetral bones, of which there is a small one on the right also.

7. 1435. Sumatran. ♂, æt. c. 30.

A82, B21, C14·7, *a*5, *b*4·6, *c*5·1, D15·1, E7·6, F5·4*p*, *a*4·7, *b*5·2, *c*4·4, G5·6, *a*4·9, *b*4·9, *c*4·4, H4·6, I5·1, J·71, K·73.

This is a very dolichocephalic skull, with a prominent and very projecting supra-occipital region. Like the last, it also presents the *processus papillaris* on the left side. Has a long ovoid *foramen magnum*. The upper front teeth have been very deeply grooved near their edges.

1438. Malay. ♀, æt. c. 30.

A62, B19·1, C13·7, *a*4·6, *b*4·9, *c*3·8, D13·5, E6·7, F5·2*p*, *a*4·1, *b*4·9, *c*3·9, G4·9, *a*4·4, *b*4·4, *c*3·8, H4·4, I5, J·77, K·73.

The temporal portions of the coronal suture and those surrounding the alisphenoids are ossified.

Average measurements of the skulls of 7 men of Sumatra. A74, B19·9, C14·2, *a*4·8, *b*4·8, *c*4·5, D14·4, E6·9, F5·3, *a*4·4, *b*4·8, *c*4·1, G5·4, *a*4·6, *b*4·7, *c*3·9, H4·6, I5·1, J·76, K·78.

Extremes, A67-83, J·71-83, K·73-83.

References.—Dr. P. BLEEKER, *Afmetingen van Schedels van inboorlingen van Java, Sumatra, Nias, Borneo, Celebes, de Moluk-sche Eilanden en Nieuw Guinea*, Batavia, 1851. Dr. C. SWAVING, *Eenige aantekeningen over de Sumatrasche Volkstammen*, 1863. W. VROLIK, *Musée Vrolik, Catalogue*, 1865, p. 82 (two dolichocephalic Sumatran skulls).

d. RACES OF THE ISLAND OF RHIO, OR RIOUW.

326. Malay. ♂, æt. c. 40.

A76, B20·2, C15·2, *a*5·4, *b*5, *c*4·8, D15·2, E6·8, F5·6*p*, *a*4·6, *b*5·2, *c*4·1, G5·8, *a*4·9, *b*5, *c*4·2, H4·4, I5·2, J·82, K·85.

Very prognathous. The upper front teeth have been rubbed down considerably.

Presented by Mr. G. F. WESTERMANN, Amsterdam.

e. RACES OF THE ISLAND OF BANCA.

I. 270. Bancan. "GLOEMBANG." *Residentie Muntok*. ♂, æt. c. 29.

A84, B21·1, C15·9, *a*5·9, *b*5·4, *c*4·6, D15·5, E7·6, F5·6*p*, *a*4·4, *b*5·3, *c*4·3, G5·8, *a*5, *b*5·2, *c*4·4, H4·7, I5·1, J·73, K·76.

The cutting-edges of both upper and lower incisors of this fine, large, dolichocephalic skull have been rubbed down to a level plane, and then the front surface of the upper ones slightly rubbed also.

2. 1368. Bancan. ♂, æt. e. 40.

V.L. d. J.

A86, B20·5, C15, *a* 5·1, *b* 5·1, *c* 4·8, D15·4, E6·9, F6*p*, *a* 4·8, *b* 5·7, *c* 4·6, G5·5, *a* 4·9, *b* 5, *c* 4·1, H4·5, I5·5, J·86, K·79.

Presents parieto-occipital flattening on the right side. Front teeth have been rubbed down.

Reference.—W. VROLIK, *Catalogue*, p. 84 (a brachycephalie, very prognathous Bankan skull).

1369. Malay. ♂, æt. c. 35. *Banca*.

V.L. d. J.

A86·5, B20·7, C14·5, *a* 5·2, *b* 5, *c* 4·3, D15·2, E7, F5·7*p*, *a* 4·8, *b* 5·1, *c* 4·4, G5·6, *a* 4·8, *b* 5, *c* 4·2, H4·9, I5·4, J·81, K·80.

Is very much awry (from parieto-occipital flattening) on the right side. Is remarkable for having the two lower incisors on the left side very slender (not more than a third the thickness of the two on the right).

f. RACES OF THE ISLAND OF JAVA.

1. 264. Javan. ♂, æt. c. 25. *Residentie Bezoekie*.

A71, B19·8, C14, *a* 4·8, *b* 5, *c* 4·2, D14·9, E6·7, F5·6*t*, *a* 4·6, *b* 5, *c* 4·4, G5·6, *a* 4·7, *b* 4·9, *c* 3·9, H4·6, I5·3, J·83, K·83.

The crowns of the upper incisors and canines have been rubbed down level, until their cavities are exposed and a mere line of them left.

2. 265. Javan. ♂, æt. e. 35. *Residentie Bagelen*.

A86, B21·3, C15·1, *a* 4·9, *b* 5·5, *c* 4·7, D15·2, E7·3, F5·7*p*, *a* 4·8, *b* 5·2, *c* 4·6, G5·5, *a* 4·7, *b* 4·5, *c* 4·4, H4·8, I5·3, J·78, K·75.

3. 266. Javan. "PA-RASILAH." ♂, æt. 47. *Residentie Pasarvean*.

A85, B21, C15·4, *a* 5·4, *b* 5·2, *c* 4·8, D15·3, E7·5, F5·7*p*, *a* 4·6, *b* 5·2, *c* 4·1, G5·6, *a* 5, *b* 4·9, *c* 4·2, H5·1, I5·3, J·76, K·74.

The crowns of the upper front teeth have been rubbed down on their edges, and a groove filed along the front of each.

4. 322. Javan. ♂, æt. 50. From the *interior* of the island.

A76, B19·9, C14·1, *a* 4·9, *b* 5, *c* 4·2, D14·6, E6·6, F5·8*p*, *a* 5, *b* 5·5, *c* 4·2, G5·5, *a* 4·7, *b* 4·8, *c* 3·9, H4·5, I5·5, J·87, K·83.

Presented by the distinguished Professor of Zoology at Leiden, Dr. J. VAN DER HOEVEN.

5. 461. Javan. ♂, æt. c. 35.

A88, B21·2, C16, *a* 5·3, *b* 5·7, *c* 5, D15·7, E7·5, F5·8*p*, *a* 4·7, *b* 5·4, *c* 4·3, G6, *a* 5, *b* 5·3, *c* 4·4, H5, I5·5, J·77, K·80.

This very fine large skull of a native of the interior of Java is very thick and heavy. Upper teeth have been rubbed down a little. No. 461*a*. Atlas and dentata of the same.

6. 462. Javan. ♂, æt. e. 25.

A81, B20, C14·3, *a*4·7, *b*5·3, *c*4·3, D15·5, E6·8, F5·7*p*, *a*4·7, *b*5·4, *c*4·6, G5·7, *a*4·8, *b*4·8, *c*4, H4·6, I5·4, J·83, K·83.

The speno-parietal sutures are absent. Parieto-occipital flattening exists on the right side, with slight frontal depression on the left. The four upper incisors have been treated in a very unusual manner. The enamel has been chipped off on both sides on the front surface of the crown of each, so as to make a small hollow, to which the betel has attached itself. No. 462*a*. Atlas and dentata of this skull.

7. 463. Javan. ♂, æt. e. 30.

A79, B19·8, C14·4, *a*5, *b*5·1, *c*4·3, D15·7, E6·6, F5·7*p*, *a*4·8, *b*5·4, *c*4·1, G5·5, *a*4·8, *b*4·9, *c*3·9, H4·3, I5·5, J·86, K·83.

Has a Wormian bone in the right speno-parietal suture, is very prognathous, and is greatly awry from parieto-occipital flattening on the left side, with consequent frontal obliquity. The upper incisors have been chipped to points (in the African manner), as well as carved at the sides like No. 462. No. 463*a*. Atlas and dentata.

Nos. 461 to 463 presented by Dr. BROEKMEIJER, Director of Civil and Military Medicine. They all died in the Military Hospital at Sourabaya.

Nos. 322 to 463 have belonged to natives of the interior of the island.

8. 752. Javan. "SIEDING." ♂, æt. e. 40. *Tagis*.

A72, B20, C14·7, *a*5, *b*5, *c*4·7, D14·7, E7, F5·3*t*, *a*4·3, *b*4·7, *c*4·3, G5·5, *a*4·7, *b*4·9, *c*4·1, H4·5, I5·2, J·75, K·78.

Exhibits caries of the palate, alveoli of upper incisors and right nasal bone. Has no speno-parietal sutures. Sent from Java by Dr. C. SWAVING.

9. 1220. Javan. ♂, æt. e. 40. *Bandjermassing, Borneo*.

A78, B19·8, C14·1, *a*4·8, *b*4·8, *c*4·5, D15·2, E6·6, F5·7*p*, *a*4·5, *b*5·1, *c*4·2, G5·7, *a*4·7, *b*5, *c*3·9, H4·6, I5·3, J·86, K·86.

The outer portions of the coronal and the posterior of the sagittal suture are ossified. The measurements show that the calvarium is very much of a cubical box (a Javan peculiarity). Both series of front teeth have been rubbed down on the edges, and a longitudinal groove has been rubbed in the flattened edge of the upper series.

10. 1221. Hybrid Java-Malayan. ♂, æt. c. 35. *Bandjermassing*.

A77, B20·6, C14·8, *a*5·2, *b*5·1, *c*4·5, D15·3, E7, F5·6*p*, *a*5, *b*5·2, *c*4·2, G5·6, *a*4·9, *b*4·9, *c*3·8, H4·7, I5·5, J·80, K·80.

This is a very fine thick and heavy cubical skull. The lower

premolars have two fangs each. The upper front teeth have been rubbed down on the edges.

11. 1370†. Javan. ♂, æt. e. 40.

V.L. d. J.

A83, B 20·7, C14·8, *a* 5·2, *b* 5, *c* 4·6, D15·3, E 7·1, F5·8*p*, *a* 4·7, *b* 5·3, *c* 4·4, G5·6, *a* 4·8, *b* 4·9, *c* 4·3, H4·8, I5·5, J·81, K·79.

Has a small paramastoid process on the left side. The upper front teeth have been curiously manipulated. Pits have been chipped on the sides of each, which retain the stain of the betel; the tooth has then been chipped to a point, and, lastly, the front surface has been polished.

12. 1371†. Javan. ♂, æt. e. 35.

V.L. d. J.

A83, B 20·3, C14·6, *a* 5, *b* 5·1, *c* 4·5, D15·4, E 6·8, F5·9*p*, *a* 4·7, *b* 5·4, *c* 4·5, G5·5, *a* 4·7, *b* 4·8, *c* 3·9, H4·4, I5·3, J·86, K·80.

The upper front teeth have been deeply grooved and ground down on their edges.

The measurements of the skeletons of these Javans will be given in a Table in Appendix B.

13. 1372. Javan. ♂, æt. e. 25.

V.L. d. J.

A69, B18·9, C13·4, *a* 4·4, *b* 4·6, *c* 4·4, D14, E 6·4, F5·5*p*, *a* 4·3, *b* 4·9, *c* 4·2, G5·3, *a* 4·2, *b* 4·5, *c* 3·8, H5·2, I5·1, J·85, K·82.

Upper front teeth chipped into pits at the sides, and into points at the edges. The alisphenoids only just reach the parietals.

14. 1373. Javan. ♂, æt. e. 40.

V.L. d. J.

A78, B 20·1, C14·2, *a* 5·2, *b* 5, *c* 4, D14·6, E 6·8, F5·7*p*, *a* 4·8, *b* 4·9, *c* 4·2, G5·4, *a* 4·7, *b* 4·8, *c* 3·7, H4·6, I5·6, J·83, K·79.

Is a little flattened on the right side of the occipital region, and has the upper front teeth grooved.

15. 1374. Javan. ♂, æt. e. 35.

V.L. d. J.

A82·5, B20·2, C14·5, *a* 5·2, *b* 5·1, *c* 4·2, D14·6, E6·9, F5·6*p*, *a* 4·8, *b* 5·1, *c* 4·1, G5·5, *a* 4·7, *b* 4·8, *c* 3·9, H4·6, I5·2, J·81, K·79.

16. 1375. Javan. ♂, æt. e. 20. Soorabaja.

V.L. d. J.

A70, B19·1, C13·5, *a* 5, *b* 4·9, *c* 3·6, D14·6, E 6·4, F5·4*p*, *a* 4·5, *b* 4·9, *c* 4·3, G5·3, *a* 4·5, *b* 4·7, *c* 3·7, H4·3, I5·1, J·84, K·82.

The alisphenoids are cut off from the parietals. The upper front teeth grooved.

Thief, born at Soorabaja.

17. 1376. Javan. ♂, æt. e. 35. Preanger.

V.L. d. J.

A79·5, B19·9, C14·3, *a* 5, *b* 5, *c* 4·3, D14·9, E 6·8, F5·6*p*, *a* 4·5, *b* 5·3, *c* 4·4, G5·6, *a* 4·8, *b* 4·9, *c* 3·9, H4·6, I5·4, J·82, K·82.

The internasal suture is ossified. The right alisphenoid is cut

off from the parietal; the left nearly so. The upper front teeth are grooved.

Born in the highlands of the district of Sookapoorra, Preanger Residency. Died in the Insane Hospital.

18. 1377. Javan. ♂, æt. e. 35. V.L.d.J.
A68·5, B19·5, C14, *a* 4·8, *b* 4·9, *c* 4·3, D14, E6·9, F5·3*p*, *a* 4·4,
b 4·8, *c* 4, G5·5, *a* 4·6, *b* 4·7, *c* 3·8, H4·6, I5, J·76, K·79.

The upper front teeth have been chipped into grooves on the sides of their anterior surface.

19. 1378. Javan. ♀, æt. c. 50. V.L.d.J.
A74, B19·6, C14·5, *a* 5·1, *b* 5, *c* 4·4, D15·1, E6·7, F5·4*p*, *a* 4·5,
b 5, *c* 3·9, G5·6, *a* 4·9, *b* 5, *c* 4, H4·2, I5, J·80, K·83.

Very prognathous. The upper incisors have been chipped to points, and also had grooves chipped at each side of their front surfaces.

Nos. 1376 to 1378 contributed by Baron VAN DER CAPELLEN, Governor-General of Nederlands India.

20. 1379. Javan. ♂, æt. c. 35. Soldier. V.L.d.J.
A72·5, B20·2, C14·4, *a* 5·2, *b* 4·8, *c* 4·4, D14·7, E7·1, F5·3*t*, *a* 4·5,
b 4·9, *c* 4·2, G5·6, *a* 4·7, *b* 4·9, *c* 4·1, H4·6, I5·4, J·74, K·78.

Remnant of a horizontal suture in each jugal bone at the zygoma. The lower half of the lambdoid suture (on each side) presents a singular anomaly. There are no serrations in it, but the bones appear as if they had wanted apposition; the result is that the parietal overlaps the occipital with a smooth lip of bone.

Born in the highlands of Java. Killed in the army of DIEPO NEGORO, in 1830.

21. 1380. Javan. ♂, æt. c. 30. *Goonong-Tala*. Soldier. V.L.d.J.
A67·5, B19·4, C14·4, *a* 4·9, *b* 5·3, *c* 4·2, D14·5, E6·7, F5·4*p*, *a* 4·5,
b 5·2, *c* 4, G5·5, *a* 4·6, *b* 4·7, *c* 3·8, H4·3, I5·4, J·80, K·82.

Very heavy. Has had a disease in the left ear, involving the mastoid. Upper front teeth are deeply grooved, one of them across the pulp-cavity.

22. 1381. Javan. ♂, æt. e. 45. V.L.d.J.
A75, B21, C15·3, *a* 5·2, *b* 5·4, *c* 4·7, D15·3, E7·3, F5·6*p*, *a* 4·9,
b 5·3, *c* 4·3, G5·7, *a* 4·7, *b* 4·8, *c* 4, H4·9, I5·3, J·76, K·78.

This large heavy skull is hyperostotic, and, consequently, is extensively synostotic. The front teeth in both jaws have been ground down, in the upper into the pulp-cavities; the upper ones have also been deeply grooved on their anterior surfaces.

23. 1436. Javan. ♀, æt. c. 30. Died in Sumatra.

A69, B19·4, C14·1, *a* 5, *b* 5·1, *c* 4, D14, E6·9, F5·1*p*, *a* 4·4, *b* 4·4, *c* 3·9, G 5·3, *a* 4·5, *b* 4·7, *c* 4, H 4, I 5, J·73, K·76.

24. 1437. Javan. ♂, æt. e. 80. Died in Sumatra.

A75, B 20·2, C14·7, *a* 5, *b* 5, *c* 4·7, D15·1, E 6·9, F5·7*p*, *a* 4·4, *b* 5·4, *c* 4·2, G5·5, *a* 4·6, *b* 4·7, *c* 3·9, H4·2, I5·4, J·82, K·79.

A heavy cranium; jaws edentulous; sutures much ossified from age.

25. 1439. Javan. ♀, æt. e. 45.

A69, B18·8, C13·6, *a* 4·8, *b* 4·7, *c* 4·1, D13·8, E 6·3, F5·4*t*, *a* 4·6, *b* 4·9, *c* 4·2, G5·4, *a* 4·6, *b* 4·8, *c* 3·9, H4·4, I5·1, J·85, K·85.

On both sides the external pterygoid process is prolonged backwards; on the right it joins the spinous process of the sphenoid, leaving a foramen between the two, immediately below the *foramen ovale*. On the left side the junction is not complete. This anomaly is very rare, according to Prof. HYRTL (*Lehrbuch der Anatomie des Menschen*, Prag, 1846, 8vo, S. 177). It is, however, seen in many other skulls of this Collection.

284*c*. Hybrid. Arabo-Malay. "PATARIMAN." ♂, æt. 29.

A79, B 20·5, C14·4, *a* 5·1, *b* 4·9, *c* 4·4, D15·4, E 6·8, F6*t*, *a* 4·8, *b* 5·3, *c* 4·2, G 5·5, *a* 4·7, *b* 4·8, *c* 4, H4·7, I5·6, J·88, K·81.

This is the skull of a half-caste, whose father was an *Arab* and whose mother was a *Malay* woman. The upper front teeth have been greatly filed down.

1382. Hybrid. Dutch father and Javan mother. ♀, æt. c. 30. V.L. d. J.

A82, B 20·7, C14·9, *a* 5·1, *b* 5·3, *c* 4·5, D15·1, E 7, F5·9*t*, *a* 5·1, *b* 5, *c* 4·6, G 5·4, *a* 4·6, *b* 4·7, *c* 4·1, H 4·7, I 5, J·84, K·77.

This beautiful skull of a young woman (who appears to have been brought up in the European manner, for her teeth are quite free from the stain of betel, or interference of art, the former universal among the natives) is a rare example of the mixed breed often met with in the population of Java. The European blood seems to have produced a smoother and more expanded forehead, a capacious calvarium, and more European-like forms. The cranium, although brachycephalic, is somewhat platycephalic. The nasal bones are remarkably long and broad, yet meeting in a ridge; alisphenoids almost cut off from the parietals by triquetral bones. She was born and died in Java.

The deeply lamented Professor Hidde HALBERTSMA, shortly before his death, published an interesting memoir on the obliquity of Javan skulls. This wryness, with signs of compression on one side of the occipital region, which Prof. HALBERTSMA had observed in other crania, and which Prof. VAN DER HOEVEN had

already said was particularly prevalent in the skulls of the Malay races in general, HALBERTSMA ascribed, chiefly and in an especial manner, to the Javans, as among the crania of this people he had found it to be very common. He attributed it to the mode of resting the head in sleep (during the early years of life) upon the hard ground (*De asymmetrie der Javaansche Schedels*, The Anthropological Review, vol. iii. p. 213). It is remarkable that one of the most striking instances of the obliquity in this Collection should be in the skull of a Dutchman (No. 1320). It obtains more or less among most races, but especially among Javans, Siamese, and other oriental people. I never saw an instance in an Australian,—which tends to confirm HALBERTSMA's view; for the Australian women lead a more unsettled life, and do not lay their infants down, but carry them *naked*, with great dexterity, about their persons.

Average measurements of the skulls of 22 Javan men. A77·1, B20·1, C14·5, *a*5, *b*5, *c*4·4, D14·9, E6·8, F5·6, *a*4·6, *b*5·1, *c*4·2, G5·5, *a*4·7, *b*4·8, *c*3·9, H4·6, I5·3, J·82, K·80.

Extremes, A67·5–88, J·74–87, K·74–86.

Average measurements of the skulls of 3 Javan women. A70, B19·2, C14, *a*4·9, *b*4·9, *c*4·1, D14·3, E6·6, F5·3, *a*4·5, *b*4·7, *c*4, G5·4, *a*4·6, *b*4·7, *c*3·9, H4·2, I5, J·80, K·81.

Average measurements of the 25 skulls of Javans, men and women. A73·5, B19·6, C14·2, *a*4·9, *b*4·9, *c*4·2, D14·6, E6·7, F5·5, *a*4·5, *b*4·9, *c*4·1, G5·4, *a*4·6, *b*4·7, *c*3·9, H4·2, I5, J·82, K·80.

Of these 25 skulls 17 are brachycephalic.

References.—BLUMENBACH, *Dec. Cran.* Tab. xxxix. SANDIFORT, *Tab. Cran.*, "Cranium Javanensis." LUCAS, *Organisch. Formenl.* Taf. ix. BLEEKER, *Afmetingen*. VAN DER HOEVEN, *Catalogus*, p. 30. C. SWAVING, *Eerste Bijdrage tot de Kennis der Schedels van Volken in den Indischen Archipel*, Tafel van afmetingen bij twintig Schedels van Javanen uit het oostelijk en middengedeelte van Java. Tafel van afmetingen bij veertien Schedels van Krankzinnige Soendanceezen uit het westelijk gedeelte van Java. The averages of these 34 Javan skulls exhibit strong brachycephalism, and equally marked hypsicephalism. The means of the first Table give J·84, K·86; those of the second Table J·82, K·85. W. VROLIK, *Catalogue*, p. 91.

g. RACES OF THE ISLAND OF MADURA.

I. 267. Maduran. "ARMADEN." ♂, æt. c. 25.
A75, B19·5, C14·2, *a*5, *b*4·7, *c*4·5, D15, E6·6, F5·5*p*, *a*4·5, *b*5, *c*4·3, G5·5, *a*4·7, *b*4·9, *c*4, H4·4, I5·2, J·83, K·83.

The alisphenoid is wholly cut off from the parietal on the right side, and almost entirely on the left.

2. 268. Maduran. ♂, æt. c. 30.

A77, B20·3, C14·6, a5·2, b5·3, c4·1, D14·8, E7·1, F5·5p, a4·6, b5·6, c4·2, G5·7, a4·7, b4·9, c3·7, H5·2, I5·3, J·77, K·80.

A supernumerary cuspidate tooth is situated behind the left upper canine, just as in No. 1121 (Tasmanian).

3. 269. Maduran. "PA-MADIE." *Residentie Sumanap*. ♂, æt. 29.

A80, B20·2, C14·9, a5·2, b5·3, c4·4, D15·3, E7·1, F5·4p, a4·8, b5·2, c4·2, G5·7, a5·2, b5·3, c3·9, H4·6, I5·3, J·76, K·80.

All the upper front teeth, extending to the second premolars, have been filed down on their edges and also grooved on their front surfaces.

4. 1384. Maduran. ♂, æt. e. 20.

V.L. d. J.

A77, B19·7, C14, a4·9, b5, c4·1, D14·7, E6·7, F5·5p, a4·5, b5·2, c4, G5·4, a4·5, b4·7, c3·8, H4·5, I5·2, J·82, K·80.

Slight parieto-occipital flattening on the right side. Upper front teeth deeply grooved.

5. 1385. Maduran. ♂, æt. c. 35.

V.L. d. J.

A82, B20·7, C15, a5·1, b4·9, c5, D14·9, E7·1, F5·7p, a4·7, b5·5, c4·2, G5·4, a4·7, b4·9, c4·3, H4·5, I5·4, J·80, K·76.

Alisphenoids almost entirely cut off from the parietals. Has the occiput oblique on the right side.

Soldier, who died at Batavia.

6. 1386. Maduran. ♂, æt. e. 45.

V.L. d. J.

A91, B21·4, C15·5, a5·3, b5·8, c4·4, D16·8, E7·1, F6p, a5, b5·5, c4·7, G6, a5·2, b5·3, c4, H4·6, I5·6, J·84, K·84.

A colossal cranium of great weight, somewhat hyperostotic, presenting all the features of the archipelagic skull strongly marked. Both upper and lower front teeth have been rubbed down on the edge.

The skull of the Chief of the Military Tribe in Madura, who was killed in the war in this island.

7. 1387. Maduran. ♂, æt. e. 60.

V.L. d. J.

A82, B20·6, C15, a5·3, b5·3, c4·4, D15·6, E7, F5·8p, a4·8, b5·3, c4·3, G5·7, a5, b5, c3·9, H5, I5·8, J·82, K·81.

The upper front teeth have been chipped to acute points, and pits grooved at their sides; three of the lower front teeth have been knocked out in early life.

Another heavy skull of a Maduran soldier, who was sent by the Sultan of Madura to Batavia, and died in the Hospital there.

This and No. 1385 collected by Governor VAN DER CAPELLEN.

Average measurements of 7 skulls of Maduran men. A 80, B 20.1, C 14.7, *a* 5.1, *b* 5.1, *c* 4.4, D 15.3, E 6.9, F 5.6, *a* 4.7, *b* 5.3, *c* 4.2, G 5.6, *a* 4.8, *b* 5, *c* 3.9, H 4.6, I 5.4, J .81, K .81.

Extremes, A 75-91, J .76-.84, K .76-.84.

Five of the 7 are brachycephalie.

Reference.—W. VROLIK, *Catalogue*, p. 96.

h. RACES OF THE ISLAND OF BALI.

1. 274. Balinese. "DJAJAWEDANA." ♂, æt. c. 30. *Beleling*. A 66, B 19, C 13.4, *a* 4.6, *b* 4.8, *c* 4, D 14.8, E 6.2, F 5.7*p*, *a* 4.3, *b* 5, *c* 4.3, G 5.7, *a* 4.8, *b* 4.9, *c* 3.6, H 4.7, I 5.2, J .92, K .92.

This wry skull of a "Paria," of the Principality of Beleling, is remarkably distorted, from extensive parieto-occipital flattening inclining towards the right side. It approaches closely to the American crania deformed by occipito-frontal pressure, the parietals being elevated into a ridge across the head. It is decidedly prognathous, and the upper incisors have been rubbed down.

2. 275. Balinese. ♂, æt. c. 50. *Karang-assan*. A 82, B 20.2, C 14.7, *a* 5.1, *b* 5.1, *c* 4.5, D 15.7, E 6.7, F 5.7*p*, *a* 4.8, *b* 5, *c* 4.4, G 5.7, *a* 4.9, *b* 5, *c* 4, H 4.7, I 5.2, J .84, K .84.

There is a great tendency to closure of the sutures in this skull.

3. 1391. Balinese. ♂, æt. e. 35. *Brahmin*. V.L. d. J. A 73, B 19.6, C 14.4, *a* 4.7, *b* 5, *c* 4.7, D 15.2, E 6.5, F 5.7*p*, *a* 4.6, *b* 5.2, *c* 4.2, G 5.6, *a* 4.7, *b* 4.8, *c* 3.7, H 4.4, I 5.5, J .87, K .85.

A remarkable example of parieto-occipital deformation on the left side. Prof. HALBERTSMA's oblique diameters are *a* 6, *b* 6.8. The consequence is a great wryness of the whole calvarium (*plagiocephalism*). It should be noted that No. 274 (another skull from the island of Bali) has suffered an extreme degree of parieto-occipital flattening. It is so great as to render it very difficult to look upon the distortion as unintentional. The skull is also awry.

References.—BLUMENBACH, *Dec. Cran.* Tab. lx. CARUS, *Atlas der Crania*. H. i. Taf. viii. DUMOUTIER, *Voy. au Pôle Sud, Anthrop.*, Atlas, pl. 44. figs. 5, 6. W. VROLIK, *Catalogue*, p. 95.

i. RACES OF THE ISLAND OF SUMBAWA.

276. Bimanese. "JAMIN." ♂, æt. 30 years. A sailor. A 80, B 20.3, C 15, *a* 5.2, *b* 5.2, *c* 4.6, D 15.3, E 7.1, F 5.5*t*, *a* 4.5, *b* 4.9, *c* 3.8, G 5.7, *a* 4.8, *b* 5.1, *c* 4.3, H 5.2, I 5.1, J .77, K .80.

The anterior portion of the sagittal and the middle of the lambdoid sutures are obliterated, and there is a general tendency

to premature closure of the sutures in this prognathous skull. All the upper teeth (before the true molars) have been rubbed down on their edges to a plane, and then deeply grooved on their outer surfaces.

Labelled by Dr. WASSINK "Eiland Bima;" hence *I infer* that Bima (the name of the most important State of Sumbawa) is sometimes applied by the Dutch to the whole island.

j. RACES OF THE ISLAND OF TIMOR.

284a. Timorese. "NAIJ KAES." ♀, æt. e. 27. *Koepang*.
A68, B19·7, C13·6, a4·7, b4·6, c4·3, D13·7, E6·9, F5·2p, a4·3,
b5, c4, G5, a4·2, b4·4, c3·9, H4·3, I4·8, J·75, K·72.

The outer extremities of the coronal suture and the middle of the sagittal are ossified.

References.—Mr. A. R. WALLACE says, "The Timorese of the interior are dusky brown or blackish, with bushy frizzled hair and the long Papuan nose. They are of medium height and rather slender figures" (*Man in the Malay Archipelago*, Trans. Ethnol. Soc. n. s. iii. 208). DUMOUTIER, *Voy. au Pôle Sud, Anthrop.*, Atlas, pl. 37. figs. 1, 2, pl. 44. figs. 1, 2, 3, 4. W. VROLIK, *Catalogue*, p. 87.

Prof. LUCAE, in his *Zur organisch. Formenl.* Taf. x., gives a fine plate of the skull of an inhabitant of the island of Floris, which is situated between Sumbawa and Timor. It is needless to say that this was before he applied his invention to geometrical projection.

B. RACES OF THE MOLUCCAS.

k. RACES OF THE ISLAND OF AMBOYNA.

1. 277. Amboynese. ♂, æt. e. 30.
A81, B20·2, C14·5, a4·8, b5·3, c4·4, D15, E7, F5·2p, a4·8,
b5, c4·5, G5·8, a4·8, b4·9, c3·9, H4·8, I5·5, J·74, K·82.
 2. 1218. Amboynese. ♀, æt. e. 30. Inscribed "Nette Amboinesche vrouw."
A60·5, B18·8, C13·2, a4·5, b4·5, c4·2, D13·9, E6·5, F5·3p, a4·3,
b4·7, c4, G5·2, a4·3, b4·4, c3·8, H3·9, I5, J·81, K·81.
 3. 1388. Amboynese. ♂, æt. e. 25. V.L. d. J.
A74, B20, C14·3, a5·2, b4·9, c4·2, D14·8, E6·8, F5·5p, a4·6,
b5·3, c4·1, G5·5, a4·9, b4·9, c3·7, H4·6, I5·3, J·80, K·80.
- Amok-erier. Has the eut of a kris on the left parietal¹.

¹ An Amok- or Amuk-erier is an inhabitant of the Indian islands, who is excited to a state of phrensy (it is commonly said by an excessive indulgence in bang-smoking; but probably other causes are equally influential), and who

4. 1389. Amboynese. ♂, æt. c. 25. V.L. d. J.
A86, B20·4, C15·2, a5·3, b5·3, c4·6, D14·8, E7·1, F5·4p, a4·6,
b4·8, c4·2, G5·7, a4·9, b4·9, c3·9, H4·5, I5·3, J76, K80.

Upper teeth rubbed down on the edges, and grooved also.

Soldier sent to Batavia, who died there. Collected by Baron VAN DER CAPELLEN.

5. 1390. Amboynese. "Tondon." ♂, æt. c. 40. V.L. d. J.
A70·5, B19·3, C13·3, a4·7, b5·3, c4·3, D14·5, E6·3, F5·4p, a4·6,
b4·9, c4·1, G5·3, a4·6, b4·7, c3·7, H4·9, I5·4, J85, K84.

Amok-cricr, killed in Batavia. The frontal bone is fractured on the left side by a blow from a kris. Parieto-occipital flattening on the left side.

Average measurements of 4 skulls of Amboyna men. A77·8, B19·9, C14·3, a5, b5·2, c4·3, D14·7, E6·8, F5·3, a4·6, b5, c4·3, G5·5, a4·8, b4·8, c3·8, H4·7, I5·4, J77, K80.

Extremes, A70·5-86, J74-85, K80-84.

References.—SANDIFORT, *Tab. Cran. div. Gent.*, "Cranium Amboynensis." DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 38. figs. 5, 6. W. VROLIK, *Catalogue*, p. 109.

l. RACES OF THE ISLAND OF TIDORE.

1. 1392. Tidorese. ♂, æt. c. 40. V.L. d. J.
A85, B21·2, C15·4, a5, b5·4, c5, D15·2, E7·4, F6p, a4·9, b5·7,
c4·9, G5·7, a4·8, b5, c4·5, H5, I5·6, J81, K77.

This large skull has a triquetral bone in each spheno-parietal suture.

2. 1393. Tidorese. ♂, æt. c. 40. V.L. d. J.
A77, B20·1, C13·9, a4·8, b4·8, c4·3, D15, E6·8, F5·9t, a4·9,
b5·4, c4·5, G5·5, a4·6, b4·8, c3·9, H4·7, I5·6, J86, K80.

The sagittal suture alone is entirely ossified, yet the calvarium is very brachycephalic.

m. ALFOUROUT RACES.

1. 1403. Alfourou. ♀, æt. c. 18. Mountaineer. V.L. d. J.
A71, B18·8, C13·7, a4·7, b5·3, c3·7, D13·7, E6·4, F5·3t, a4·4,
b4·8, c4, G5·4, a4·5, b4·7, c3·7, H4·1, I4·9, J82, K84.

Teeth not stained with betel. The spheno-basilar synchondrosis not ossified.

runs about with drawn kris in his hand, crying Amok! Amok! killing any person he meets. This horrid mania occurs throughout the Archipelago, but is rarely met with in Javans. Being recognized and understood, it is the law that an Amok-cricr may be rightly destroyed by any one who encounters him; and such is always his fate.

2. 1404. Alfourou. ♂, æt. c. 25.

V.L. d. J.

A76, B19·5, C14·1, a4·8, b5·1, c4·2, D14·2, E6·7, F5·5_p, a4·4, b5·1, c4·1, G5·5, a4·6, b4·7, c3·9, H4·6, I5·3, J·82, K·82.

There is a slight remnant of a transverse suture (a relic of the *os zygomaticum accessorium*) in each malar bone. The teeth are deeply stained with betel; and the upper front ones have not only been chipped to sharp points, but also had pits chipped at their sides. These appearances render it probable that the man has lived in Java as a slave.

3. 1405. Alfourou. ♂, æt. c. 40.

V.L. d. J.

A72·5, B19·7, C14·3, a4·8, b5, c4·5, D14·5, E6·8, F5·4_t, a4·3, b4·7, c4·2, G5·5, a4·5, b4·7, c3·9, H5, I5·2, J·79, K·80.

Has two triquetral bones in the left spheno-parietal suture, one in the right¹. Is much awry from parieto-occipital flattening on the left side. The upper front teeth have been chipped to points and pits formed on their edges. All the teeth much stained by chewing betel.

The Dutch apply the term Alfourou to the tribes inhabiting the interior of the Halmahera group of islands, and even New Guinea and the Philippines. Halmahera itself is properly the name of Jilolo, one of the Moluccas; and it is most probable that these Alfourou skulls come from the Moluccas.

References.—VIMONT, *Traité de Phrén.* pl. cxx. figs. 2, 3, Intérieur de la N. Guinée. PRICHARD, *Phys. Res.* ed. 3. i. figs. 8, 9, 10. VON BAER, *Crania Selecta*, Tab. 4, 5, 6. W. VROLIK, *Catalogue*, p. 67.

C. RACES OF CELEBES AND BORNEO.

n. RACES OF THE ISLAND OF CELEBES.

1. 278. Buginese. ♀, æt. c. 40. *Kingdom of Boni*.

A76·5, B20, C14·7, a5, b5, c4·7, D14·1, E7·1, F5·5_p, a4·9, b5, c4·1, G5·4, a4·6, b4·7, c4, H4·7, I5·1, J·77, K·76.

A thin European-looking skull, with very prominent, aquiline nose.

¹ The occurrence of these ossicles in the skull of the Papuan (No. 1401) and in this Alfourou cranium, calls to mind the remark of Prof. W. VROLIK, who, having observed the same anomaly in his No. 178 (which he believed was the skull of an Alfourou), in DUMOUTIER's Alfourou (*Voy. au Pôle Sud*, pl. 33), and also in VON BAER's Papuan (*Cran. Selecta*, Tab. 1), says it appears that this peculiar osteogenesis is more frequent in Papuans than in other races.—*Catalogue*, p. 68.

2. 464. Buginese. "SIDINDRING." ♂, æt. c. 40. *Macassar*.
A67·5, B19·2, C14, *a*4·7, *b*5·1, *c*4·2, D14·6, E6·6, F5·5*t*, *a*4·4,
*b*5·3, *c*4·2, G5·6, *a*4·6, *b*4·7, *c*3·9, H4·8, I5·5, J·83, K·84.

The upper front teeth have been rubbed down. No. 464*a*.
Atlas and dentata of this skull.

3. 1219. Buginese. ♀, æt. e. 70. *Macassar*.
A73, B19·5, C14·5, *a*5·3, *b*5·2, *c*4, D14·2, E6·9, F5·3*p*, *a*4·3,
*b*4·9, *c*3·9, G5·4, *a*4·6, *b*4·7, *c*3·7, I5, J·76, K·78.

4. 1397. Buginese. ♂, æt. c. 30. V.L. d. J.
A73, B19·7, C14·2, *a*4·7, *b*4·8, *c*4·7, D14·4, E6·8, F5·4*p*, *a*4·7,
*b*5·3, *c*4·2, G5·4, *a*4·5, *b*4·6, *c*3·9, H4·6, I5·3, J·79, K·79.

Killed in the war with DIEPO NEGORO. Has a long cut of a kris across the left frontal and parietal, passing through the bones. It extends from the left parietal tuberosity, and crosses the frontal to the right orbit. Is awry from parieto-occipital flattening on the left side.

5. 1394. *Macassar*. ♂, æt. c. 25. V.L. d. J.
A79, B20·4, C14·7, *a*4·9, *b*5·2, *c*4·6, D15, E7·2, F5·6*p*, *a*4·7,
*b*5·2, *c*4·8, G5·6, *a*4·7, *b*4·9, *c*4·3, H4·7, I5·6, J·77, K·77.

Traces of a longitudinal suture in the zygomatic processes of the malar bones.

6. 1395. *Macassar*. ♂, æt. c. 30. Boatman. V.L. d. J.
A83, B20, C14·3, *a*5·1, *b*5, *c*4·2, D15·5, E6·6, F6·1*p*, *a*4·9,
*b*5·5, *c*4·6, G6, *a*5, *b*5, *c*3·7, H5·1, I5·6, J·92, K·90.

Alisphenoids cut off from the parietals. Upper front teeth deeply grooved. Has an extensive parieto-occipital flattening, which stretches over the posterior third of the parietals and the occipital as far as the superior transverse ridge and tuberosity, and is symmetrical. The result is a brachycephalism which scarcely seems compatible with undesignedness; yet there is good reason to believe it accidental. This is probably the most exaggerated instance of this deformation in the Collection.—H. J. HALBERTSMA, *De asymmetrie der Javaansche Schedels*.

7. 1396. *Macassar*. ♂, æt. e. 35. V.L. d. J.
A72·5, B18·9, C13·6, *a*4·8, *b*4·6, *c*4, D14·9, E6·3, F5·7*p*, *a*4·6,
*b*5, *c*4·4, G5·4, *a*4·8, *b*4·9, *c*3·5, H4·5, I5·1, J·90, K·85.

Another very brachycephalic skull, with extensive, symmetrical parieto-occipital flattening.

8. 1383. Celebes, native of. ♂, æt. e. 25. Soldier. V.L. d. J.
A67, B19·4, C14·4, *a*4·8, *b*5·2, *c*4·4, D14·5, E6·8, F5·4*p*, *a*4·3,
*b*5·2, *c*4, G5·5, *a*4·5, *b*4·7, *c*4, H4·4, I4·8, J·79, K·80.

There is a tendency in this skull to hyperostosis and to obli-

teration of the sutures. Has the foramen through the external pterygoid process on the right side, as in No. 1439 (Javan). The bones are affected with disease on the inner surface of the right side of the body of the lower jaw, and in both malar bones.

9. 1398. Celebes, native of. ♂, æt. e. 40. Soldier. V.L.d.J. A72, B20·5, C14·8, a5·2, b4·8, c4·8, D14·8, E7·4, F5·4p, a4·5, b5·1, c4·2, G5·7, a4·7, b4·8, c4·3, H4·9, I5·4, J·73, K·77.

Has the mark of an old injury on the right parietal.

10. 1399. Celebes, native of. ♂, æt. e. 20. Soldier. V.L.d.J. A79, B20, C14·5, a5·2, b4·8, c4·5, D15·3, E6·9, F5·7p, a4·8, b5·5, c4·1, G5·4, a4·7, b4·9, c4·2, H5, I5·1, J·82, K·78.

The upper front teeth are deeply rubbed down and also grooved.

Average measures of 6 skulls of men, natives of the island of Celebes. A72·8, B19·8, C14·4, a4·9, b4·9, c4·5, D14·7, E6·9, F5·5, a4·5, b5·2, c4·2, G5·5, a4·6, b4·7, c4·1, H4·7, I5·2, J·79, K·79.

Extremes, A67-79, J·73-83, K·77-84.

References.—BLUMENBACH, *Dec. Cran.* Tab. xlix., lix. M. J. WEBER, *Ur- u. Racen-Formen*, Tab. xii., xiii. DUMOUTIER, *Voy. au Pôle Sud, Anthrop.*, Atlas, pl. 38. figs. 1, 2, 3, 4. Dr. C. SWAVING, *Eerste Bijdrage tot de Kennis der Schedels van Volken in den Indischen Archipel* (a separate copy of which I owe to the author's great politeness), Acht Boeginezen (Plate of Buginese skulls of Boni), Zes Makasaren, Vier Menandonezen. RETZIUS, *Ethnol. Schriften*, pl. iv. fig. iii. W. VROLIK, *Catalogue*, p. 100.

o. RACES OF THE ISLAND OF BORNEO.

1. 279. Dayak. "PA-HANDOERAN." ♂, æt. e. 30. *Bandjermassing*.

A79, B20·2, C15·3, a5·2, b5·4, c4·7, D14·9, E7·1, F5·3p, a4·7, b4·7, c4·2, G5·7, a5, b5, c3·9, H4·2, I5·4, J·74, K·80.

Has a Wormian bone in the left spheno-parietal suture; a short, broad, prognathous face, the angles of the lower maxilla being greatly everted; and is awry from parieto-occipital flattening. The teeth have been fearfully tampered with at the dictation of fashion. Both upper and lower front teeth have been rubbed down on their cutting-edges, the first considerably; then the four upper incisors and two canines have been tapped with a small hole through the enamel and into the cavity of the tooth (on their front surfaces), and a metallie peg with a round head driven into each. In this way (when the upper lip was raised) the shining knob on each tooth would be displayed. The metal is yellow, and no doubt it is brass. The pegs of the outer incisors

have fallen out, and the holes pierced into their pulp-cavities are seen.

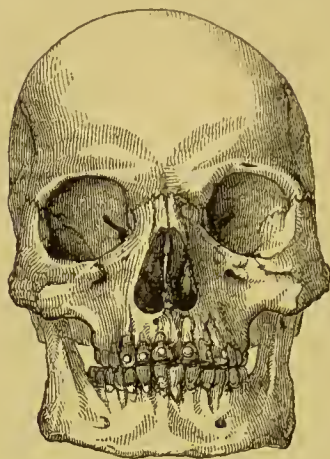


Fig. 82.—*Cranium of a Dayak Man.*—No. 279.—*Quarter-size.*

2. 280. Dayak. ♂, æt. e. 35. *Poeloe Petak.*

A60, B18·7, C13·7, a4·7, b4·9, c4·1, D13·2, E6·6, F4·9p, a4·2, b4·3, c3·9, G4·9, a4·3, b4·5, c3·7, H4·1, I4·5, J·74, K·74.

A very small, feminine-looking skull of a river-sailor from Poeloe Petak, who died of dysentery. The upper front teeth have been ground down on their edges and then grooved.

3. 281. Dayak. "SEDOENG." ♂, æt. e. 25. *Poeloe Petak.*

A71, B19·7, C14·4, a5, b5·1, c4·3, D14, E7, F5·3t, a4·2, b4·3, c4, G5·2, a4·5, b4·6, c3·9, H4·5, I4·9, J·75, K·74.

Another small eranium of a river-sailor, who died of dysentery. It is long and prognathous. The sagittal suture has been prematurely ossified without producing proper seaphoecephalism or other echange of form. The upper front teeth have been ground down on their cutting-edges into their eavities.

4. 282. Dayak. "JEDOEIJ." ♂, æt. e. 30. *Kapoeas River.*

A river-sailor.

A75, B20·2, C15·1, a5, b5·3, c4·8, D15·2, E7·2, F5·3t, a4·3, b4·4, c4·4, G5·8, a4·9, b5·1, c4·4, H4·7, I5·3, J·73, K·80.

The two outer upper ineisors have had their cutting-edges rubbed down a little, the two broad middle ones considerably; so that there is a wide gap into the mouth. There is a small exostosis or *condylus tertius* of J. F. MEEKEL (within the oeeipital foramen) at the bottom of the *clivus*. It is in the median line, and constitutes Prof. H. J. HALBERTSMA's Form C (pl. ii. fig. 1). Prof. J. VAN DER HOEVEN noted a similar tuberele in his Javan skull (No. 99, *Catalogus*).

5. 283. Dayak. "RANGKAP." ♂, æt. c. 30. S.E. coast.
A65, B18·8, C13·5, a4·9, b4·8, c3·8, D14·1, E6·3, F5·4t, a4·5,
b4·5, c4·2, G5·1, a4·5, b4·6, c3·5, H4·6, I5·2, J·85, K·81.

A small brachycephalic skull, the front teeth of which have been ornamented by another device. A fine groove has been carved in the enamel, across the front of each. This notch is seen filled with betel on all the incisors and the lower canines.

6. 284. Dayak. ♂. From the District of *Sango, Sambas Kapoeas*.
B19·7, C14·8, D14·8, E6·9, F5·4p, G5·7, H4, I5·3, J·78, K·82.

Presents great obliquity of the occiput, depressed on the left side.

A very curiously prepared skull. The lower jaw is stained on the inside a deep red with gum-dragon, and is fastened on with pieces of rattan. Pieces of very light soft wood have been put into the places of the missing teeth (which are all absent), into the nostrils, and in the position of the ears. Other inequalities are filled up with a reddish-brown resin. The entire skull has then been covered with tinfoil. Two cowry shells represent the eyes; the eyebrows, and a small tuft of beard, are made of stiff black hair. On the vertex and sides of the calvarium there is an ornamental regular and symmetrical device, cut through the tinfoil and coloured red. A string passing through a hole in the sagittal suture is for suspension in the "head-house."

Mr. A. R. WALLACE, the distinguished traveller, who spent much time in Borneo, has informed me that skulls are now considered to be of great value by the Dayaks. A good skull is regarded to be worth as much as a slave, *i. e.* about £25 of our money.

I am indebted to the liberality and great kindness of Dr. Geerlaf WASSINK¹, prompted by the friendly influence of Sir John BOWRING, late Governor of Hong Kong, for a great portion of this fine collection of crania from the Indian Archipelago (for Nos. 271, 272, 273, 270, 264, 265, 266, 282, 267, 268, 269, 274, 275, 276, 284, 277, 278, 279, 280, 281, 282, 283, and 284).

There is a considerable tendency to early obliteration of the sutures in these oriental skulls. In the extensive series of Prof.

¹ Since the above passage was written, I have heard of the lamented death of Dr. WASSINK, at Batavia, on the 17th of Oct. 1864, at the age of 53 years, after an illness of six days. He had been an officer in the army of Netherlands India 35 years. He was Chief of the Medical, Civil, and Military Service in India, Chevalier of the Military Willems Order and of the Nederlandseh Leeuw, Commander of the Luxemburg Order of the Oak Leaf Crown, Chevalier of the Austrian and some German Orders, and had the rank of Major-General of the Indian army. Such are the well-merited distinctions conferred by the Netherlands government on the most eminent medical officers. The dedication of this Catalogue, to the materials comprised in which he was so important a contributor, was offered to the acceptance of Dr. WASSINK. Alas! his memory alone can now be honoured by its publication.

J. VAN DER HOEVEN, Nos. 89 and 97, both crania of Javans, the sagittal suture has disappeared. A want of symmetry in the two sides of the calvarium is general among Dr. VAN DER HOEVEN'S specimens. He notes it in almost a moiety of them. Dr. BROEKMEIJER, whose long residence in Netherlands India has afforded him great opportunities for acquiring a knowledge of the customs of the natives, informs me that in the interior of Java, infants are laid constantly on their backs during the early period of their lives, and while the bones of the cranium are flexible, which occasions these undesigned distortions. Dr. VAN DER HOEVEN has not thought it necessary to mention all the fantastical tricks practised upon the teeth. In No. 78 he says, of the upper teeth, "fere usque ad basin detriti sunt, superficiei plana, aequa."—*Catalogus*, p. 30.

7. 1222. Dayak. ♀, æt. e. 70. *Bandjermassing*. Inscribed "Malayo-Dayak."

A67, B19·3, C13·9, *a* 4·7, *b* 5·2, *c* 4, D14·3, E6·6, F5·3*p*, *a* 4·3, *b* 4·9, *c* 4, G5·4, *a* 4·6, *b* 4·7, *c* 3·6, I5·1, J·80, K·81.

All the border of the lower jaw has been cut off with a kris.

8. 1223. Dayak. ♀, æt. c. 23. *Bandjermassing*. Inscribed "Dayak-Malayo."

C a 4·9, D14·2, F5*p*, *a* 4·2, *b* 4·8, G a 4·8, *b* 4·9, H4·3, I5·1.

The squamous sutures present a chain of triquetral bones running from the alisphenoids; another is seen in the middle of the left side of the coronal. The fore part of the alveoli of the upper jaw has been the seat of caries. The occipital bone has been hacked out, and the interior of the calvarium *painted* with a black pigment. It is to be feared that this poor girl has had a hard fate. The left ascending ramus of the lower jaw exhibits a number of gashes made with a kris.

9. 1224. Dayak. "Djingang." ♂, æt. c. 30. *Bandjermassing*. Inscribed "Dayak-Malayo."

A77, B20·1, C14·8, *a* 5, *b* 5·4, *c* 4·4, D14·6, E7·1, F5·1*p*, *a* 4·2, *b* 4·8, *c* 4·2, G5·8, *a* 4·6, *b* 4·8, *c* 4, I5·4, J·70, K·81.

10. 1225. Dayak. "BENTING." ♀, æt. e. 30. *Bandjermassing*. Inscribed "Dayak."

A66·5, B19·2, C13·8, *a* 4·8, *b* 4·9, *c* 4·1, D14, E6·5, F5·4*t*, *a* 4·5, *b* 4·7, *c* 4·2, G5·5, *a* 4·5, *b* 4·7, *c* 3·7, H4·5, I5·1, J·83, K·84.

The upper alveoli have been affected with caries seriously at the front.

11. 1242. Dayak. "INDOE ALAMBADEN." ♀, æt. c. 30. *Upper Kapoeas River*, Central Borneo.

A70, B20, C15, *a* 4·9, *b* 5·2, *c* 4·9, D14·3, E7·1, F5·3*p*, *a* 4·3, *b* 5·1, *c* 3·9, G5·6, *a* 4·5, *b* 4·8, *c* 4, H4·2, I4·9, J·74, K·78.

A prognathous, dolichocephalic skull, which has some small

exostoses upon it; one of these is tooth-like and situated at the base of the right mastoid process (on its outside). The outer portions of the coronal suture are entirely obliterated; the rest of the coronal and the sagittal are much ossified. The teeth are dyed with betel, but not filed.

Inscriptions on the cranium and accompanying it (in the handwriting of Dr. BROEKMEIJER), "INDOE ALAMBADEN, geboren te Foanu. Boven Kapoeas. Vader PA HARIMANNY. Moeder INDOE MIWING. Beide van echt Dayak Stam. Overleden van *Variolæ*. Oud 30 Jaren." "Dayaksche Vrouw, geboortig uit de Landstreek Kahayan, Eiland Borneo. Vader en Moeder, Grootvader en Grootmoeder van bekend Dayaks ras." Dr. BROEKMEIJER informed me that this is the only skull of a Dayak woman he ever obtained. She was attacked with small-pox, and consequently killed by a severe blow with a kris. This has cut through the frontal, parietal, and temporal bones on the left side. Another blow has cut the right side of the lower jaw and broken it through.

12. 1243. Dayak. "ROHOENG." ♂, æt. e. 35. *Upper Kapoeas River*.

A69, B19·6, C14·4, a5·2, b5, c4·2, D14·8, E6·6, F5·5p, a4·6, b4·9, c4·2, G5·5, a4·7, b4·8, c3·7, H4·6, I5·2, J·83, K·83.

This fine brachycephalic skull is inscribed by Dr. BROEKMEIJER "ROHOENG, zoon van PA-UIRIVANT, kleinzoon van PA-HAMBIT, beide echte Dayaks; geboren te Smaroi * * * aan de boven Kapoeas."

13. 1244. Dayak. "SANDIE." ♂, æt. 28. *Katingan*.

A73, B20, C15·2, a4·9, b5·7, c4·6, D14·6, E7·2, F5·2p, a4·3, b4·9, c4, G5·5, a4·7, b4·8, c4, H4·7, I5·1, J·72, K·76.

This fine Dayak skull, as will be seen from the measurements, deviates considerably from the form that is usual among the series, and from that which prevails among Malayan crania. Indeed it approaches much to that peculiar form which obtains in New Caledonia, the New Hebrides, &c., upon which remarks are made subsequently, and which I have designated *hypsistenocephalic*. It is also remarkable as possessing (on the right side only) the rare *os zygomaticum accessorium* before alluded to. It occurs again (and then on both sides) in another skull of this Collection, which is also that of a Dayak (No. 1409). The Negro skull (No. 141) of Prof. VAN DER HOEVEN's *Catalogus* presents this anomaly on both sides. I noticed another instance of this separate bone in a Dayak cranium in the Anatomical Museum at Würzburg; and one was pointed out to me by Prof. WELCKER (on the left side) in the skull of a Lepcha, among the Indian skulls collected by the Brothers SCHLAGINTWEIT. It has been considered not to occur in the crania of Caucasians; but the

example before alluded to (p. 86), observed by Prof. GARBIGLIETTI in the skull of an ancient Etruscan, shows that this view is not correct. Still there is no doubt whatever that it is vastly more rare in Europeans than in some other races—those of Borneo, for instance. The anomaly of a jugal bone divided by a *transverse* suture into two separate parts was observed in a monstrous embryo, on the right side, by the elder SANDIFORT, and figured in his *Observationes Anatomico-pathologicae*, which figure has been repeated by Prof. GARBIGLIETTI (fig. 2a) in the Table to his *Di una singolare e rara Anomalia dell' Osso Jugale ossia zygomatico noterella*, 1866. The irregularity of a transverse suture in the malar bone of a Negro skull is mentioned by SÖMMERRING in his great work on Anatomy. There are two instances of it enumerated in the *Catalogue* of the VROLIK Museum. One is in an adult skull, of unknown or unrecorded race, purchased at the sale of SANDIFORT's collection. Here the anomaly occurs on both sides (*Catalogue*, p. 142). The other is in the cranium of a woman considered to be Chinese (*ib.* p. 41).;

J. F. MECKEL, in his great System of Anatomy, states that he always found the jugal bone to be formed out of a single centre (*Handbuch der menschl. Anat.* Bd. ii. S. 137). But the recent researches of Prof. GARBIGLIETTI show that at an early period of intra-uterine life there is a separate centre of ossification for the lower margin of the bone (see figures 5a, 6a, of the left malar bone of a foetus at less than two months). And the fact of the persistency of a transverse suture in the bone occurring in so many instances in an unossified state, as well as the more or less evident traces of this suture in so many other examples in this Collection (Prof. GARBIGLIETTI points to the skull of the Calmuck, Tab. v. of BLUMENBACH's *Decades*, and that of an Illinois Indian, Tab. xxxviii.), fully bears out his view. The learned Professor states that he considers that this bone, thus rendered accessory to the *os jugale*, is the homologue of the *tympano-jugal bone* which is particularly observable in the chick, some reptiles, and in fishes (*ib.* p. 10).

The sutures of No. 1244 are all in a normal state. The upper front teeth have been rubbed down, so as to expose the dentine and their cavities, but are without any trace of caries.

The accompanying inscription is "Dayakker. SANDIE. Geboren en wonachtig te Katingan. Oud 28 jaren. Van beroep, Lanbauw."

14. 1245. Dayak. ♂, æt. c. 60. *Upper Dousson River, Central Borneo.*

A76, B19·7, C14·7, a5·2, b4·9, c4·6, D14·5, E6·9, F5·3p, a4·4, b4·9, c3·9, G5·5, a4·6, b4·9, c4, H4·2, I5·3, J76, K79.

Accompanying inscription:—"Bewoner van de boven Dousson (Central Borneo). Waarsehijlijk van gemengd Dayaks en

Maleirch ras." This man lived with his family on the side of the Tewen river, one of the sources of the Barito, near the centre of Borneo.

15. 1246. Dayak. "MANOEHING." ♂, æt. e. 35. Koussan. E. coast.

A81, B20·5, C14·7, a5·2, b5, c4·5, D15·8, E7, F5·8p, a5, b5·4, c4·3, G5·7, a5, b5·1, c4·1, H5·1, I5·3, J·82, K·81.

This fine, large brachycephalic and prognathous skull is accompanied by the *os hyoides*. It has had a portion hacked out, at the junction of the sagittal and the coronal suture, with a kris.

Copy of accompanying note:—"MANOEHING, inboorling van Koussan, of Koesan, gelegen in de nabijheid van Pagottan, op de oostkust van Borneo, alwaar een Dayaksehe stam gevestigd is die door ligehaams groote van de verderc Dayak stammen verschilt. De Vader van MANOEHING was NGAIJOENG, Moeder REKAN, grootvader hiete SANGALANG, grootmoeder RINGKIN:—alle eecht dayaksche namen. Waarsehijnlijk is deze stam gemengd met Malaijers en Boeginesen."

Dr. BROEKMEIJER informs me that he had another skull of the same tribe of Koesan, in the S.E. corner of Borneo, now in the Museum of the Clinieal Institute at Rotterdam, which is of the same form; and adds that they are a very tall people, differing in stature from the other Dayaks of Borneo—a statement quite confirmed by this great skull. They are in all probability a distinct race.

This very fine series of Dayak skulls (Nos. 1222 to 1246) was collected during his serviees in Borneo, and presented by Dr. J. G. X. BROEKMEIJER, Chevalier of the Netherlands Order of the Lion and Dirigerend Offieier van Gesondheid, or Chief Military Physician of Netherlands India¹.

16. 1307. Dayak. Probably ♂, adult. Imperf. calv.
B20·3, C14·8, a5·2, b5·7, c3·7, D14·7, E7·2, F5·4, G5·2, J·75, K·72.

The right half of a calvarium which has been divided in the line of the sagittal suture. Three holes have been bored in the vault for suspension by a strip of bamboo in the hut or head-house. The surface has been carved with a pattern. The zygoma has been broken and replaeed with a piece of native string.

17. 1308. Dayak. Probably ♀, adult. Imperf. ealv.
B19·4, C14·3, a5·1, b5, c4·2, D14·3, E6·7, F5·3, G5·2, J·79, K·77.

Another right half of a calvarium eut and prepared for suspension. The orbit has been filled with a piece of wood, the eye

¹ Dr. BROEKMEIJER died on the voyage from Bencoolen to Batavia (August 1866), at the age of 46 years.

being represented by a white cowry shell (*Cypræa moneta*), and six smaller, eut cowries surrounding it. The nostril is also closed with a piece of wood. The surface has been elaborately carved and stained of a deep-red colour, with dragons-blood prepared from the fruit of the *Calamus draco*.

18. 1406. Dayak. ♂, adult.

V.L. d. J.

A 75·5, B 20·7, C 14·9, *a* 5, *b* 5, *c* 4·9, D 15·4, E 7·2, F 5·6*t*, *a* 4·4, *b* 5, *c* 4·3, G 5·7, *a* 4·9, *b* 5, *c* 4·2, H 4·3, I 5·4, J 7·7, K 7·9.

This large skull has been elaborately prepared for the head-house, and is a rare and very fine example. After the extraction of the brain, it has been dried and smoked over the fire, so that the bones at the base have got charred. The orbits and nostrils have been filled with wood, two white cowry shells placed in the former for eyes, an artificial wooden nose has been formed and covered with tinfoil, of Banean tin; the frontal bone has been ornamented with tinfoil across the supraorbital region, and above this with a symmetrical carving, which extends along both the parietals. The two holes for suspension are in the upper part of the frontal, which, like the rest of the vertex, has been highly polished. The face and lower parts of the cranium have been stained with gum-dragon. The inferior maxilla has been attached by strings through holes. The teeth are absent. It is such a curiously prepared head as this which, in Borneo, is considered to be worth a slave, the money value of which is £25.



Fig. 83.—*Prepared Skull of a Dayak.*—No. 1406.—*Quarter-size.*

19. 1407. Dayak. ♂, adult. Calv.

V.L. d. J.

A 65, B 19·5, C 13·9, *a* 4·7, *b* 5·2, *c* 4, D 14, E 6·9, F 5·3*t*, *a* 4·4, *b* 4·4, *c* 4, G 5, *a* 4·6, *b* 4·7, *c* 3·9, I 5·2, J 7·6, K 7·2.

This calvarium is another example of a head prepared as a

trophy; but it is ornamented in a very unusual manner. A hole has been bored at the commencement of the sagittal suture, for suspension. A thick lock of coarse Dayak hair, of a dark brown colour¹, has been bound up tightly with a hair-band, and tied to the right zygoma, and then carried across the vertex to be attached again to the hole at the former point. The teeth are absent. The alisphenoids scarcely touch the parietals.

20. 1408. Dayak. ♀, æt. e. 35. Calv. V.L. d. J.
A66, B19.4, C14.2, a4.9, b5.1, c4.2, D14.1, E6.6, F5.3t, a4.3,
b4.9, c4.2, G5.3, a4.5, b4.7, c3.9, I4.8, J.80, K.80.

This calvarium has a hole at the fore end of the sagittal suture, for suspension in the head-house.

21. 1409. Dayak. ♀, æt. c. 20. Calv. V.L. d. J.
B17.9, C12.9, a4.5, b4.5, c3.9, D13.2, E6.1, F4.8p, a3.9, b4.4,
c4, G4.8, a4, b4.2, c3.4, I4.7, J.78, K.78.

This small calvarium of a young woman (cruelly destroyed in her youth and beauty) is of extreme interest. A horrible cut of a kris, which has fallen on the middle of the ascending scale of the occipital, severed the bone and the cerebellum, and passed in a horizontal direction to the extent of fully three inches, so as to reach the neighbourhood of the condyles and of the medulla oblongata, shows how she has been struck down by the strong arm of her ruthless assailant, when flying from his murderous pursuit. A slighter perpendicular blow (given when she had fallen) has cut off the upper point of the occipital, as well as a portion of the parietals. A similar crime, only of ten-thousand-fold deeper dye, is reported in 'The Times' of this day (August 8, 1865), as perpetrated by a regiment of murderous *Federal troops* (the Third Regiment of Colorado Volunteers) upon a number of friendly Cheyenne Indians (their *women* and *children*) at a place on Sand Creek, near Fort Lyon. The diabolical act was afterwards commented upon by Mr. Geo. CATLIN, the persevering friend of the American Indians (*Trübner's Literary Record*, i. 137).

This calvarium is also curious as an example of the rare *ossa zygomatica accessoria* on both sides, which are really portions of the malar bones. No. 1244 affords an instance of this conformation on the right side only². In the left speno-parietal suture a long triquetral bone is present.

¹ Such hair is what is usually termed *black*. Since Dr. BROCA, with such great elaboration and pains, has produced a chromatic scale for the eyes, hair, and skin, we are now able to indicate their tints with considerable precision. The colour is 41 of his *Tableau Chromatique*.—*Mém. de la Soc. d'Anthrop. de Paris*, ii. pl. v.

² Since this was written, the learned Prof. Antonio GARBIGLIETTI has investigated the anomaly here described with great ingenuity and success (*Di una singolare e rara Anomalia dell' Osso Jugale ossia Zigomatico*, Torino, 1866).

22. 1410. Dayak. ♀, æt. e. 6. Calv. V.L. d. J.

Has received a slight cut from the sharp kris on the left of the occiput.

23. 1411. Dayak. ♀, æt. e. 17. Calv. V.L. d. J.
 A67, B19·4, C14·5, a4·7, b5·3, c4·5, D13·6, E6·8, F5·2p, a4·2,
 b4·8, c4·1, G5·2, a4·3, b4·6, c4, I4·2, J·76, K·76.

The scratches of a knife (seen all over the surface of this calvarium) show that it also has been prepared for a trophy.

Nos. 1406 to 1411 were derived from the collection of Baron VAN DER CAPELLEN, Governor-General of Netherlands India.

Prof. VROLIK's *Catalogue* contains four examples of the prepared heads of Dayaks (Nos. 256, 257, 258, and 259). The first is covered with tinfoil, like our No. 284; the second has a blackish circle painted on the summit, from which brown rays, alternating with plates of laminated lead (tin?), pass to a horizontal line which makes the circuit of the cranium, and is otherwise prepared; the two last have been dried with portions of skin and hair on. In his *Considérations Générales*, at the head of his "Famille Bornéone," he has given a good résumé of the strange and ferocious avidity for heads which characterizes the Dayaks, their dexterity in decapitation, from which the Dutch have bestowed the untranslatable name of *Kopsnellers* upon them, in allusion to the velocity with which they cut heads off¹, and of the superstitions connected with them. Mr. J. DALTON gives a full and most curious account of head-hunting, the respect and veneration entertained for heads, and their intervention in all the important affairs of life. MOOR's *Notices of the Indian Archipelago*, 4to, 1837. CRAWFURD, *Dict. of Indian Islands*, art. Dyak; *The Geography of Borneo*, Trans. R. Geogr. Soc. 1852. W. VROLIK, *Catalogue*, p. 111.

Average measurements of 11 ♂ skulls of Dayaks. A72, B19·7, C14·5, a5, b5·1, c4·4, D14·5, E6·9, F5·2, a4·4, b4·7, c4·1, G5·4, a4·7, b4·8, c3·9, H4·5, I5·1, J·75, K·78.

Extremes, A60-81, J·70-85, K·74-83.

Average measurements of 3 ♀ skulls of Dayaks. A67·8, B19·5, C14·2, a4·8, b5·1, c4·3, D14·2, E6·7, F5·3, a4·3, b4·8, c4, G5·5, a4·5, b4·7, c3·7, H4·3, I5, J·79, K·82.

Average measurements of 14 skulls of Dayaks, ♂ and ♀. A69·7, B19·6, C14·3, a4·9, b5·1, c4·3, D14·3, E6·8, F5·2, a4·3, b4·7, c4, G5·4, a4·6, b4·7, c3·8, H4·4, I5, J·76, K·79.

¹ Like scalping for the North-American Indian, so decapitation has been taken to be the most characteristic device by which to mark the Dayak. The Frontispiece to the First Volume of P. J. VETRI's great work on Borneo (*Borneo's Wester-afdeeling, Geographisch, Statistisch, Historisch*, 1854) represents a Dayak returning from a head-hunt, with his kris in his right hand and a bleeding head dependent from the left.

A comparison of the measurements of these crania of the Dayaks of Borneo with those of the Javaus will show considerable discrepancy. The skulls of the Dayaks are smaller in every dimension, unless we except Nos. 1244 and 1246, the latter a remarkable skull of a peculiar people. The races of the two islands must be considered to be essentially distinct. Yet Mr. CRAWFURD says "the Dyaks are all of one and the same race, and this race is the true Malayan"¹. The denomination Malayan is a comprehensive, not a discriminative term. When it is recollected that the lower animals of the archipelago in the different islands, in some cases when these are separated only by narrow straits, even the birds, are totally distinct², it will not seem at all surprising that the races of man should also differ essentially.

Reference.—Dr. C. SWAVING, *Eerste Bijdrage*. Viertien Schedels van Banjareezen van Borneo. Plate of Banjareese skull of Banjermassing. Zeven Schedels van Daijaks van Borneo. Plate of Dayak skull from Poeloe Petak. Drie Schedels van Daijaks. Plate of a Dayak skull of Landak.

D. RACES OF THE PHILIPPINE ISLANDS.

p. RACES OF THE ISLAND OF PANAY.

1. 758. Bisayan. ♂, æt. c. 50. Pueblo of *Camando*. Calv. A78, B20·3, C14·7, a5, b5, c4·7, D15·2, E7, F5·6p, a4·4, b5·2, c4·2, G5·6, a4·8, b4·9, c4·2, I5·3, J·80, K·80.

Presents marks of deformation from ossification of the spheno-frontal sutures and of the extremities of the coronal. The *tête annulaire* of FOVILLE. The incisors are absent; but one canine which remains shows that all the front teeth have been rubbed down on their edges and a groove made on their front surfaces.

2. 759. Bisayan. ♀, æt. c. 18. *Camando*. Calv. A68, B19·7, C14·2, a5·4, b4·6, c4·2, D14·4, E6·7, F5·5p, a4·7, b5·1, c4·2, G5·4, a4·6, b4·8, c3·7, I4·8, J·82, K·80.

Has one of Prof. HALBERTSMA's *processus papillares* on the left side.

¹ *Dict. of Ind. Archip.* p. 128.

² *Ibid.* p. 417, on the authority of TEMMINCK. WALLACE, *Man in the Malay Archip.*, Trans. Ethnol. Soc. iii. 198. Speaking of certain birds, he affirms "not one of which ever passes across this narrow strait," of fifteen miles, between Baly and Lombock. This is not a solitary instance of such limitation of birds to one small locality. "The Philip Island Parrot (*Nestor productus*), now extinct, had its range limited to that island, which is only five or six miles in extent; and although Norfolk Island is not distant more than five miles, it had never been found on that island."—*Gatherings of a Naturalist in Australasia*, by Geo. BENNETT, M.D., p. 213.

3. 760. Bisayan. ♀, æt. c. 25. *Camando*. Calv.

A70, B19·1, C13·9, *a*4·7, *b*4·9, *c*4·3, D14·4, E6·7, F5·4*p*, *a*4·3, *b*5, *c*4, G5·5, *a*4·5, *b*4·7, *c*3·9, I4·8, J·82, K·80.

The front teeth have been filed down considerably and broadly grooved.

4. 1089. Bisayan. ♂, æt. c. 45. *Camando*.

A79·5, B20·3, C14·5, *a*5, *b*5, *c*4·5, D15·3, E7, F5·8*p*, *a*4·6, *b*5·3, *c*4·4, G5·7, *a*4·5, *b*4·6, *c*4·2, H4·7, I5·3, J·82, K·81.

Front teeth have been grooved.

5. 1090. Bisayan. ♀, æt. c. 35. *Camando*.

A70·5, B19·7, C14·7, *a*5·1, *b*5·3, *c*4·3, D14·2, E7, F5·3*p*, *a*4·3, *b*5, *c*3·9, G5·2, *a*4·6, *b*4·8, *c*4·1, H4·1, I5, J·75, K·74.

Has a Wormian ossicle in the left spheno-parietal suture. The upper incisors have been filed down on their front surfaces.

6. 1091. Bisayan. ♂, æt. c. 70. Pueblo of *Miagao*.

A72, B19·7, C14·3, *a*4·7, *b*5·3, *c*4·3, D14·7, E6·7, F5·3*t*, *a*4·4, *b*4·6, *c*4·1, G5·4, *a*4·5, *b*4·7, *c*3·9, H4·4, I5·2, J·79, K·80.

7. 1092. Bisayan. ♂, æt. c. 35. *Miagao*. Calv.

A60, B18·4, C13, *a*4·8, *b*4·2, *c*4, D14·1, E6·1, F5·4*p*, *a*4·2, *b*4·9, *c*4·2, G4·8, *a*4·3, *b*4·4, *c*3·5, J·88, K·78.

This very small and very brachycephalic calvarium has the marks of the male sex notwithstanding.

8. 1093. Bisayan. ♂? *Miagao*. Imperf. calv.

A70, B19·7, C14·8, *a*4·9, *b*5·3, *c*4·6, D14·8, E6·9, F5·4*t*, *a*4·4, *b*4·7, *c*4·2, G5·3, *a*4·7, *b*5, *c*4·1, J·78, K·76.

Average measurements of 5 skulls of Bisayan men. A71·9, B19·7, C14·2, *a*4·9, *b*4·9, *c*4·4, D14·8, E6·7, F5·5, *a*4·4, *b*4·9, *c*4·2, G5·3, *a*4·5, *b*4·7, *c*4, H4·5, I5·2, J·81, K·79.

Average measurements of 3 skulls of Bisayan women. A69·5, B19·5, C14·2, *a*5·1, *b*4·9, *c*4·2, D14·3, E6·8, F5·4, *a*4·4, *b*5, *c*4, G5·3, *a*4·5, *b*4·7, *c*3·9, H4·1, I4·8, J·79, K·78.

Average measurements of 8 skulls of Bisayan men and women. A70·7, B19·6, C14·2, *a*5, *b*4·9, *c*4·3, D14·5, E6·7, F5·4, *a*4·4, *b*4·9, *c*4·1, G5·3, *a*4·5, *b*4·7, *c*3·9, H4·3, I5, J·80, K·79.

Reference.—DUMOUTIER, *Voy. au Pôle Sud*, *Anthrop.*, Atlas, pl. 40. figs. 1, 2, 5, 6.

1. 1051. Negrito, or Ate. ♂, æt. c. 50.

A61, B18·7, C13·8, *a*4·7, *b*4·6, *c*4·5, D13·5, E6·5, F5·3*p*, *a*4·2, *b*4·6, *c*3·8, G5·4, *a*4·3, *b*4·7, *c*4, H4·3, I5·3, J·81, K·83.

This very rare and fine prognathous cranium of a Negrito has

a large triangular, interparietal bone occupying the whole of the scaly portion of the occipital¹, and a small exostosis on the right side of the frontal bone. Each of the external pterygoid processes is pierced with a foramen. This foramen is produced by an extension of the plate backwards till it meets the *spina angularis* of the sphenoid, said to be a very rare anomaly by HYRTL, who adds that it may be regarded as the ossification of the *Ligamentum pterygo-spinosum* of CIVININI. The nasal bones are almost flat, and the middle face broad. The skull is small and, save a number of teeth which have dropped out, quite perfect.

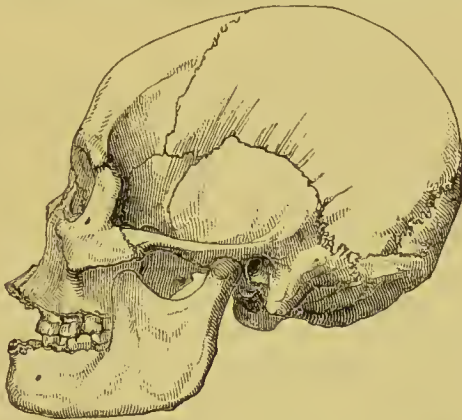


Fig. 84.—Cranium of an Até, or Negrito.—No. 1051.—Quarter-size.

2. 1095. Negrito, or Ate. ♂, æt. e. 60.

B19·3, C13·6, D14·5, E6·7, F5·2, a4·3, b4·4, c4, G5·1, a4·5, b4·6, c3·8, H4·3, I5·3, J·77, K·76.

Another, small, prognathous skull of a man who has evidently lived beyond middle age. The nasals are larger and more prominent, the forehead as small and receding. This example also is perfect, excepting some teeth. It is of the greatest interest, as it retains the hair. This consists of numerous very short and small grey curls scattered over the head, but not growing in separate tufts, as far as I can ascertain, not woolly, nor spirally twisted. It is distinct from the woolly hair of the African Negro, and also from the spiral-tufted locks of the so-called Papuan races; and the same may be said if we speak of the general aspect of the skull: although in some features resembling those of other people, yet it is distinct from the cranium of any other race. The hair has been black, but is rapidly changing to grey. There are fractures about the occipital, which may have been done in life.

¹ A calvarium of an Aëta in the Muséum d'Hist. Nat. at Paris, presented by the famous DE LA GÉRONIÈRE, also has an *os Inceæ*, but ossified in all the middle portion of its lower suture with the occipital. At each side the suture remains, and is an example of the *Sutura Proræ* of Gerard BLASIUS. A figure of the occiput of this calvarium is given in Dr. H. JACQUART'S *La Valeur de l'Os Epactal*, pl. xxv. fig. 4.

q. RACES OF THE ISLAND OF GUIMARAS.

1094. Negrito, or Ate. ♂, aged. Calv.

A 69·5, B 20·3, C 14·4, a 5, b 5, c 4·4, D 13·6, E 7·1, F 5·21, a 4·6, b 4·3, c 4·2, G 5·3, a 4·7, b 4·6, c 4, I 5·1, J 7·3, K 7·4.

This is a longer calvarium. There is a Wormian bone in the left spheno-parietal suture. The *alveoli* have been wholly absorbed.

This series of Philippine skulls was collected for me at great pains and in the most obliging manner by Fray Augustin DE CASTRO and N. LONEY, Esq.

Mr. A. R. WALLACE, in an able and instructive memoir, makes a just remark respecting the Negritos, which may be worth quoting. He says, "I have no difficulty in satisfying myself that they have no affinity or resemblance whatever to the Papuans, with which they have been hitherto associated" (*Man in the Malay Archipelago*, Trans. Ethnol. Soc. n. s. 1865, iii. 209). The philosophy of Mr. WALLACE would not allow of these curious people being regarded as a race *sui generis*, although he finds no other races to which he can ally them, save the Semangs of the Malayan peninsula and the Andaman Islanders, of both of whom it may be safely said that we know very little; yet he concludes that "the Negritos must be considered to have had, in all probability, an Asiatic rather than a Polynesian origin" (p. 211). Dr. MOUAT expresses himself strongly as being struck more by the diversity of the Andaman Islanders from "certain other remarkable races" than by any analogy (*Andaman Islanders*, p. 329). He, however, does not allude to the Semangs, one of whom is mentioned by Mr. John ANDERSON as having "his hair woolly and tufted, his colour a glossy jet black, his lips were thick, his nose flat, and belly very protuberant, resembling exactly two natives of the Andaman Islands who were brought to Prince of Wales Island in 1819" (LOGAN'S *Journ. of the Indian Archipel.* iv. 427). The kind of hair possessed by these latter it is by no means easy to determine; for they shave the head very carefully; and the evidence of observers is far from satisfactory, unless we take Mr. ANDERSON'S positive testimony (and he had the opportunity of seeing it grown) to be conclusive. In Dr. MOUAT'S *Adventures and Researches*, a further history of these Mineopies observed by Mr. ANDERSON is given, and it is said "their hair was of a woolly texture" (p. 275). In the *Ethnological Transactions*, 1863, ii. 48, Dr. MOUAT is reported to have said that "'JACK ANDAMAN'S' hair grew in tufts, and was undoubtedly becoming, like that of Papuans, woolly; but it was not sufficiently grown to enable a decision." Still, in the subsequent work just quoted, which is devoted to the Andaman Islanders, he never alludes to its tufted nature; and in his summary of the

physical characters of these singular creatures he remarks, "their hue is remarkably black and lustrous, but they are not woolly-headed" (p. 329). In the photographs of "JACK ANDAMAN," taken on his arrival at Calcutta, his head is so shaven that the nature of his hair cannot be discovered. In the coloured drawings made by that accurate artist Mr. Colesworthey GRANT, it is nearly the same. I have now got a specimen of the hair of "MARY ANDAMAN," which certainly grows in minute spiral tufts.

Average measurements of the skulls of 3 Negrito men. A65·2, B19·4, C13·9, *a* 4·8, *b* 4·8, *c* 4·4, D13·8, E 6·7, F 5·2, *a* 4·3, *b* 4·4, *c* 4, G 5·2, *a* 4·5, *b* 4·6, *c* 3·9, H 4·3, I 5·2, J 7·7, K 7·7.

E. RACES OF THE WESTERN PACIFIC.

1. RACES OF THE CAROLINE ISLANDS.

1260. Oolean. "EROLIMO." Island of Oolea, Iouli, or Oullcay. ♂, æt. c. 40.

A69, B19·6, C14·4, D14·3, E 7, F 5·1, *a* 4·3, *b* 4·5, *c* 3·9, G 5·6, *a* 4·6, *b* 4·7, *c* 3·8, H 4·4, I 5·3, J 7·1, K 8·0.

In this interesting skull the coronal and sagittal sutures are almost wholly ossified, the lambdoid partly so; but I have the assurance of the learned donor, which was confirmed by my own observation at Leyden, that the form it presents is in exact conformity with the rest of the series of 9 skulls from the island of Oolea, obtained by Dr. SWAVING. EROLIMO died of dysentery at Batavia, Dec. 14, 1853. He appears to have had some of his front teeth punched out in early youth, viz. in the upper row the right inner incisor, and in the lower row the right canine and outer incisor; he has also lost two of the upper molars by caries.

This very rare specimen I have obtained by the great kindness of the distinguished Professor J. VAN DER HOEVEN, to whom it was presented by Dr. C. SWAVING. The former, in a copious and valuable memoir, has described the series to which it belongs (*Beschrijving van Schedels van Inboorlingen der Carolina-Eilanden*, 2 Plaat. Anthropological Review, January 1866). It was this island of Oolea, or Ulle, which was the native place of KADOU, with whom KOTZEBUE met at the island of Aur, another of the group, 1500 miles from Oolea. Of KADOU, who, with three others, in a canoe with sails, had been driven out of their course by a tempest and kept at sea eight months, there is a very interesting account in KOTZEBUE's *Voyage*. He remained with the Russians a long time, and gave them much information. There is likewise a portrait of him in L. CHORIS's *Voyage pittor. autour du Monde*, 1822, fol., livr. 5. pl. xvii. Dumont d'URVILLE, *Voy. pitt. autour du Monde*, 1835, ii. 528.

S. RACES OF NEW GUINEA.

1. 686. Native of New Guinea, or Papuan. ♀, æt. e. 18. *Arfak Mountain*, near Dorey. Calv.

A69·5, B19·5, C14·6, a4·6, b5·5, c4·5, D13·5, E7, F5·2p, a3·9, b4·8, c3·9, G5·2, a4·2, b4·6, c4·4, I4·7, J·74, K·74.

This delicate dolichocephalic calvarium of a young girl has a very narrow forehead and prominent parietal tubers. There are triquetral ossicles in both spheno-parietal sutures, as well as one in the left limb of the lambdoid and one in each *additamentum suturæ lambdoidalis*. The teeth are all absent.

No. 686a. A comb, made of bamboo, worn by the men in New Guinea. It is split into four prongs and ornamented with a carved head. The hair of this head is represented by feathers, and is frizzed out. The long nose is pierced for a nose-stick.

Collected by Mr. Alfred R. WALLACE.

2. 1400. Waigioean, or Papuan. Island of *Wayges Solascut*, or *Waigioe*, N.W. coast of *New Guinea*. ♂, æt. e. 30. V.L. d. J.

A73, B20·4, C14·4, a5, b4·9, c4·5, D15, E7·2, F5·6p, a4·7, b5·1, c4·1, G5·3, a4·8, b4·8, c4·3, H4·4, I5·2, J·77, K·73.

This is a thick and rather heavy, dolichocephalic and prognathous skull of a young man, who was sold as a slave. The sagittal suture is entirely ossified and traceless, all the others quite open. A minute parietal foramen may still be distinguished on the left side. There is no perceptible deformation, unless it be in the comparative dolichocephalism of the calvarium. The alveolar arch is capacious, the teeth (which are free from the stain of betel) large, and the nasal bones prominent. It is a remarkably fine and perfect example of a very inaccessible race.

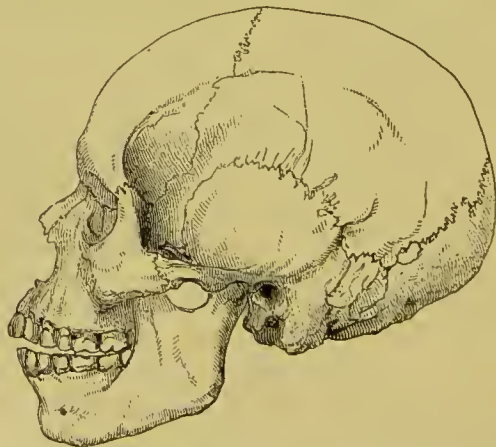


Fig. 85.—Cranium of a Papuan from the Island of Waigioe.—
No. 1400.—Quarter-size.

3. 1401. New-Guinea Islander, or Papuan. ♂, æt. e. 30. V.L.d.J. A73, B19·4, C13·5, a4·7, b4·5, c4·3, D14·5, E6·5, F5·4p, a4·4, b5, c4, G5·3, a4·5, b4·7, c3·8, H4·5, I5·2, J·83, K·81.

Exhibits marks of earies of the right temporal bone about the glenoid cavity; on the left side there is a triquetral bone in the spheno-frontal and -parietal sutures. The upper front teeth have been grooved, and the whole are stained with betel, which render it probable that the man has lived and died in Java.

4. 1402. New-Guinea Islander, or Papuan. ♂, æt. e. 30. V.L.d.J. A80, B20·5, C14·9, a4·8, b5·5, c4·2, D14·3, E7·3, F5·3p, a4·5, b5, c4, G5·6, a4·7, b4·7, c4·1, H4·5, I5·4, J·72, K·77.

This fine skull is extensively synostotic. The sides of the coronal and, particularly, the right spheno-parietal and spheno-frontal sutures are totally effaced. Besides this, the rest of the coronal, the sagittal, the lambdoid, the spheno-frontal, and the spheno-parietal sutures on the left side are very nearly ossified. It cannot be said that there are any of the marks of true scaphocephalism; but the calvarium is unusually dolichocephalic. The face is very prognathous, and the perfect teeth entirely free from the stain of betel¹.

Average measurements of the skulls of 3 Papuan men. A75, B20·1, C14·2, a4·8, b4·9, c4·3, D14·6, E7, F5·4, a4·5, b5, c4, G5·4, a4·6, b4·7, c4, H4·4, I5·2, J·77, K·77.

References.—QUOY and GAIMARD, *Voy. de l'Uranie et de la Physicienne*, Zoologie, Atlas, pls. 1, 2. G. SANDIFORT, *Tab. Cran.*, "Cranium Ineolae N. Guineae." VIMONT, *Traité de Phrén.* pl. eviii. fig. (intérieur), pl. exvii. fig. 1 (Ile de Rawak). LUCÆ, *Organisch. Formenl.* Taf. xi. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 33. figs. 3, 4, pl. 34 (Skulls from the Island of Tond, Torres Straits), pl. 35. figs. 3, 4 (from Triton Bay, New Guinea). K. E. VON BAER, *Crania Selecta*, Tab. 1, 2, 3. Id. *Ueber Papuas und Alfuren*. LUCÆ, *Morphologie der Rassen-Schädel*, Taf. viii. (Ile de Rawak). *Nieuw Guinea, Ethnographisch en Natuurkundig onderzocht en beschreven in 1858*. Amsterdam, 1862 (contains many portraits). A. GOUDSWAARD, *De Papoea's van de Geelvinksbai*. Schiedam, 1863. W. VROLIK, *Catalogue*, p. 73.

¹ The Dutch use the term Papuan to mean a native of New Guinea, or of the surrounding islands of Gubie, Waygioe, Batanta, Salawattie, Mysol, and very often of Gube. The exact derivation of No. 1400 only is known. Up to 1825, the Sultans of Tidore and Ternate were accustomed to send fleets to New Guinea and the Papuan Islands to carry off Papuans as slaves. This may explain the presence of these skulls in the Collection.

t. RACES OF THE SALOMON ISLANDS, NEW GEORGIA.

1. 235. Salomon Islander. ♂, æt. c. 35. Makira, *Island of Arossi*, or *San Christoval*. Calv.

A73, B20·3, C14·6, a4·8, b5·4, c4·4, D14·5, E7·3, F4·9t, a4·4, b4·2, c4·3, G5·2, a4·5, b4·7, c4, I5·6, J·67, K·71.

The metrical proportions of this calvarium are singular—its length, narrowness, the equal width of the frontal and occipital, and the lowness of the frontal region. It is prognathous, has a heavy supraciliary ridge, which runs across the nose. The zygomata are wide apart and stand off the head, so as to allow a very large space for the crotaphite muscles—eminently phenozygous.

2. 236. Salomon Islander. ♂, æt. c. 30. Makira, *San Christoval*. Calv.

A66·5, B19·6, C14·1, a4·6, b4·7, c4·8, D15, E6·8, F5·4t, a4·3, b4·8, c4·4, G5·4, a4·3, b4·5, c3·7, I5·3, J·79, K·79.

On the left side the alisphenoid is completely cut off from the parietal.

3. 237. Salomon Islander. ♀, æt. c. 35. Makira, *San Christoval*. Calv.

A71, B19·8, C14·7, a4·8, b5·6, c4·3, D14, E7·1, F5p, a4·2, b4·5, c3·9, G5·6, a4·6, b4·7, c3·8, I5·1, J·70, K·78.

The basioccipital of this calvarium has been broken away to take out the brain; and in No. 235 the condyloid processes of the occipital have been broken off.

Nos. 235, 236, and 237 were collected by Mr. Jno. MACGILLIVRAY, Surgeon of H.M.S. 'Herald.'

4. 386. Salomon Islander. ♂, æt. c. 30. *Island of Ghila*, or *Guadalcanar*. Calv.

A74, B20·1, Ca4·7, b5·2, D14·7, E7·2, F5·2p, a4·4, b4·9, c4·2, G5·6, a4·7, b4·8, c4, I5, J·72, K·77.

In this calvarium also, the lower part of the occipital, close to the foramen, has been broken away; and there is a string of small beads attached to the left zygoma. They are 19 in number; and all except two appear to be made of red coral: one is white, and another black. They have been strung on a native vegetable fibre. Both these facts render it most probable that these islanders prepare and preserve calvaria¹.

Presented by Rear-Admiral H. M. DENHAM, F.R.S., then of H.M.S. 'Herald.'

¹ Since this was written, I have ascertained that at Makira and other places there are long sheds, under which are suspended the skeletons of fishes &c., and among the rest many human skulls. These calvaria are from such head-houses.

5. 569*. **Salomon Islander.** Cast of the prepared head of a man of the *Island of Rubiana*. A substance like clay is thickly coated over the face and painted black; and into this, small neatly carved pieces of mother-of-pearl are stuck. They are arranged in a serpentine form, and run in tortuous windings across the forehead, down the left cheek, round the chin, and up the right cheek. A carved oval piece of pearl represents the left eye. The large mouth is made on one side.

Presented by Prof. Allen THOMSON, who has the original. There is another specimen of these prepared heads (with hair upon it¹) in the Museum of the Royal College of Surgeons of England, which was presented by Dr. Geo. BENNETT, of Sydney.

There is some account of the Salomon Islands in d'URVILLE's *Voy. pitt. autour du Monde*, 1835, ii. 150. In his second voyage, this great circumnavigator visited them; and his account of the natives is quoted by VON BAER (*Ueber Papuas und Alfuren*, 1859, S. 32). Besides, in the splendid Atlas of DUMOUTIER, forming a portion of the illustrations to this *Voy. au Pôle Sud*, there are figures of four busts of Salomon Islanders, from the island of Isabelle. The Austrian frigate 'Novara' visited the Salomon Islands, but in the most transient manner. Dr. Karl SCHERZER, in his beautiful volumes describing the Expedition (*Reise der Novara um die Erde*, 1861, ii. 429), gives an account of their interview with the natives, whom they regarded as the wildest and most uncivilized they had met with in their circumnavigation. All observers speak of the great diversity of the inhabitants of the different islands.

The visit of the yacht 'Wanderer' to these islands, where her unfortunate owner, Mr. Benjamin BOYD, met with his melancholy and untimely fate, is commemorated in *The last Cruise of the Wanderer*, by John WEBSTER, Sydney, 1863. Mr. WEBSTER (Mr. BOYD's companion) describes the natives of San Christoval as "almost black, with woolly hair and the countenance characteristic of the Papuan negro"—as having low projecting foreheads—as discolouring the hair by means of lime, so as to render it of a bright yellow, or of various shades of brown and orange, and frizzing it out like a large mop, with ornamented combs which they wear in it,—all characteristics of the people of New Guinea and of the Feejeeans. The very close resemblance of the numerals to those of the Maoris, a distinct brown, finer, Polynesian people, shows the valuelessness of these terms as a test of race.

Average measurements of 3 skulls of men of the Salomon Islands.

A71·1, B19, C14·3, a4·7, b5·1, c4·6, D14·7, E7·1, F5·1,
a4·3, b4·6, c4·3, G5·4, a4·5, b4·6, c3·9, I5·3, J·72, K·76.

¹ This hair is in small corkscrew locks, about an inch long. Its colour is like the No. 42 of BROCA's Tableau. There appears to be some extraneous colouring-matter at the ends of the tufts, which seem to grow separately.

u. RACES OF NEW CALEDONIA.

1. 682. New Caledonian. ♀, æt. c. 30.

A65, B19·6, C14·5, *a* 4·7, *b* 5·2, *c* 4·6, D13·6, E7, F5·1*t*, *a* 4·1, *b* 4·4, *c* 4, G5·2, *a* 4·7, *b* 5, *c* 3·9, H4, I5, J·72, K·74.

There is a triquetral bone in the left spheno-parietal suture, and a very small diamond-shaped one in the lambdoid, at the termination of the sagittal.

2. 683. New Caledonian. ♂, æt. c. 35.

A73, B19·9, C15·1, *a* 4·8, *b* 5, *c* 5·3, D15, E7, F5·1*t*, *a* 4·5, *b* 4·6, *c* 4·4, G6, *a* 4·8, *b* 4·9, *c* 4, H4·4, I5·5, J·72, K·85.

No spheno-parietal suture on either side.

3. 684. New Caledonian. ♂, æt. c. 40. Calv.

A74, B20·1, C14·6, *a* 4·8, *b* 5·4, *c* 4·4, D14·5, E7, F5·5*t*, *a* 4·2, *b* 4·7, *c* 4·3, G5·6, *a* 4·7, *b* 4·8, *c* 3·9, I5·6, J·78, K·80.

This calvarium is by no means narrow.

Nos. 682 to 684 are derived from a cemetery at the northern extremity of the island, and were collected by Mr. Jno. MACGILLIVRAY.

4. 812. New Caledonian. ♂, æt. c. 25. *Isle of Pines*.

A80, B19·9, C15·4, *a* 5·2, *b* 5·5, *c* 4·7, D14·8, E7·3, F5·2*p*, *a* 4·3, *b* 5, *c* 4, G5·9, *a* 4·8, *b* 5, *c* 4, H4·7, I5·2, J·71, K·80.

5. 813. New Caledonian. "JOEY." ♂, æt. c. 25. Native of *Yengen*.

A73, B20·2, C15, *a* 5, *b* 5·3, *c* 4·7, D13·8, E7·5, F4·8*p*, *a* 4·2, *b* 4·3, *c* 4·1, G5·5, *a* 4·7, *b* 4·7, *c* 4, H4·4, I5·3, J·64, K·73.

The proportions of these two very fine crania are remarkable. They are the longest and narrowest skulls of any race, whilst their height is great. The three measures of width in the latter (*Fa*, *b*, *c*) are almost equal. See on this subject *Anthropological Review*, January 1866, p. 55.

Both died of dysentery in the island of Eramanga (1859–60), and were collected by Mr. MACGILLIVRAY, author of the *Narrative of the Voyage of H.M.S. 'Rattlesnake.'*

6. 1159. New Caledonian. ♂, æt. c. 30. *Kanala*.

A78, B20·5, C14·6, *a* 5·1, *b* 5·1, *c* 4·4, D15·3, E7, F5·7*p*, *a* 4·6, *b* 5·3, *c* 4·2, G5·7, *a* 4·8, *b* 5, *c* 4, H4·2, I5·4, J·81, K·81.

The calvarium is exceedingly awry from parieto-occipital flattening on the right side, and concomitant flattening of the left side of the frontal¹.

¹ This occipital deformation is of the kind described by Prof. HALBERTSMA in the skulls of Javans, and is most likely accidental, from laying the head to sleep in early life upon the ground. M. BOURGAREL is satisfied the natives do not use any apparatus to produce distortion of the skull (*Mém. de la Soc. d'Anthrop.* i. 274).

This remarkable cranium was obtained on the summit of Deadman's Peak, at the entrance of the river Kanala, by Capt. JOUAN, of H.I.M. schooner 'Bonite.' It has been subjected to fire on this spot, where the natives burn and expose their dead. Presented by Dr. Geo. BENNETT, F.L.S.

Average measurements of 4 New Caledonian skulls of men. A75, B20, C15, *a*4·9, *b*5·3, *c*4·7, D14·5, E7·2, F5·1, *a*4·3, *b*4·6, *c*4·2, G5·7, *a*4·7, *b*4·8, *c*3·9, H4·5, I5·4, J70, K79.

Extremes, A73-80, J64-78, K73-85.

These averages exhibit the extraordinary length, height, and narrowness of the skulls of New Caledonians, from which I have derived the name of *hypsi-stenocephali* for the crania, of this series, obtained from the Western Pacific¹.

References.—The crania of New Caledonians have been carefully described, measured, and rather extensively figured by M. A. BOURGAREL, in the *Mém. de la Soc. d'Anthrop.* i. 251, and the *Bull. de la Soc. d'Anthrop.* Tome i. Planches iv.-ix. Ed. SCHWARZ, *System of Anthropometrical Investigations*, Vienna, 1862, 4to, Plate.

v. RACES OF THE LOYALTY ISLANDS.

1. 810†. Loyalty Islander. "AWITA." ♂, æt. c. 25. *Island of Lifu.*

A73·5, B19·8, C15·2, *a*5, *b*5·6, *c*4·6, D14·9, E7, F5·2*p*, *a*4·1, *b*4·9, *c*4·1, G5·9, *a*4·7, *b*5, *c*4, H4·6, I5·1, J74, K84.

The *synchondrosis spheeno-basilaris* is not quite ossified, yet all the teeth have been cut. The external auditory foramina are both obstructed by small nodular exostoses on their sides. SELIGMANN, *Abnormität an den Titicaca-Schädeln*, K. Akad. der Wissensch. in Wien, 1864, Nro. 8, S. 57. H. WELCKER, *Ueber knöcherne Verengerung und Verschliessung des äusseren Gehörganges*, Archiv für Ohrenheilkunde, Bd. i. S. 163.

See Appendix B for measurements of skeleton.

2. 811. Loyalty Islander. "KUE." ♀, æt. c. 24. *Island of Mare.*
A70, B19·8, C14·8, *a*5, *b*5, *c*4·8, D14·2, E7·2, F5*p*, *a*4·2, *b*4·7, *c*4·1, G5·2, *a*4·6, *b*4·7, *c*3·9, H4·4, I5, J69, K72.

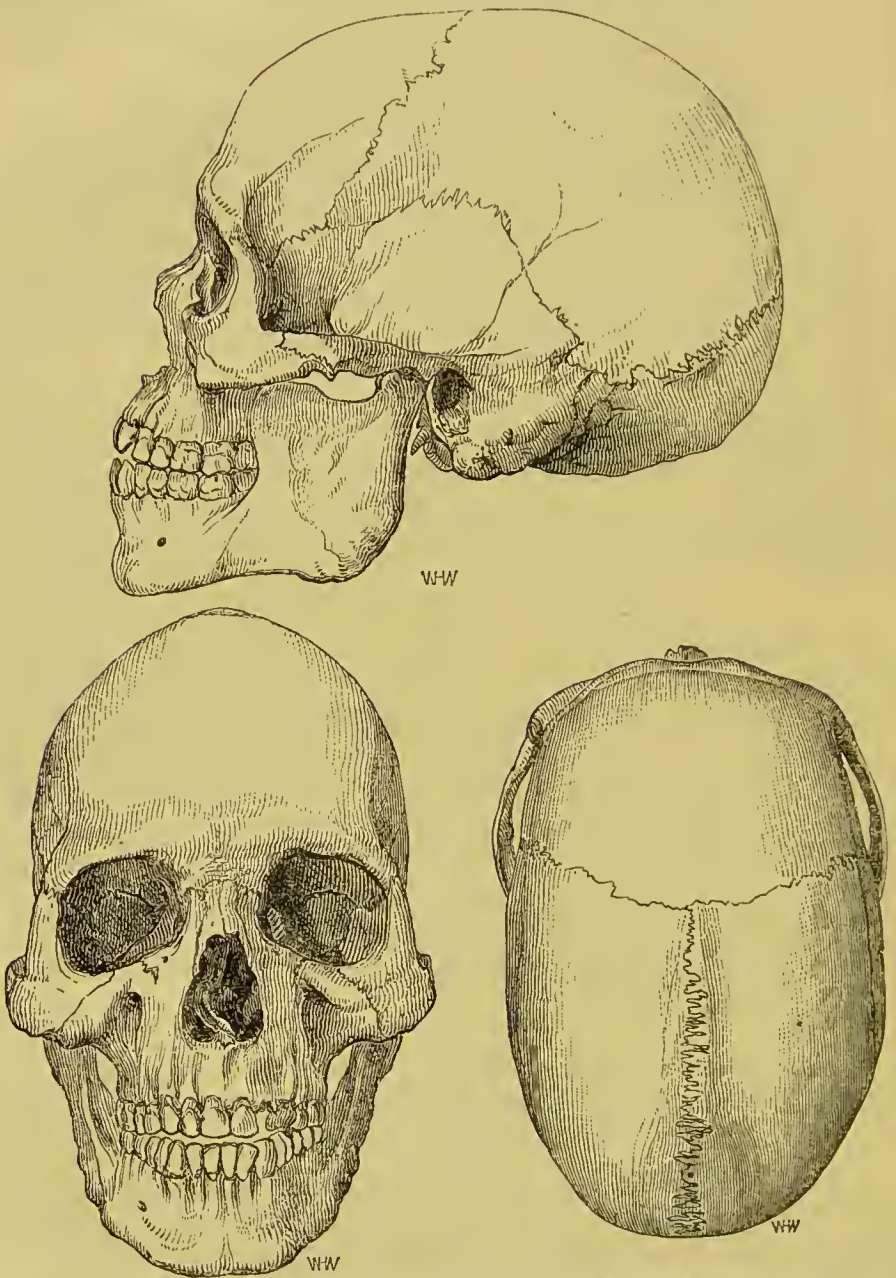
3. 816. Loyalty Islander. "BIAT." ♀, æt. e. 30. *Island of Lifu.*
A82, B20·8, C15·8, *a*5·3, *b*5·7, *c*4·8, D15, E7·6, F5*t*, *a*4·4, *b*4·1, *c*4·1, G5·8, *a*4·9, *b*5·1, *c*4·4, H4·9, I5·5, J65, K76.

Has a triquetral ossicle in the right spheeno-parietal suture.

These two beautiful skulls of remarkably fine young women, which bear marks, in a slight notch on the edges of the upper outer incisor and canine on the right side, of their devotion to the "sweet-smoking pipe," are singularly long, high, and narrow.

¹ J. Barnard DAVIS, *On the peculiar Crania of the Inhabitants of certain Groups of Islands in the Western Pacific*, 4to, 1866, 3 Plates, *Natuurkundige Verhandelingen van de Hollandsche Maatschappij der Wetenschappen te Haarlem*, xxiv. Deel.

They were collected by Mr. Jno. MACGILLIVRAY, among those of other victims to dysentery, at Eramanga, in 1859-60.



Figs. 86-88.—Cranium of “Biat,” Lifuan.—No. 816.—Third-size¹.

w. RACES OF THE NEW HEBRIDES.

i. 685†. Tannese. ♂, æt. c. 30. *Island of Tanna.*

A79, B20·2, C14·3, a4·8, b5·2, c4·3, D14·8, E6·7, F5·7t, a4·7, b5·4, c4·3, G5·6, a4·7, b4·8, c3·8, H4·5, I5·5, J·85, K·83.

Has a persistent frontal suture; the nasals are rather narrow,

¹ *Op. cit.* pl. i. figs. 1, 2, 3.

but of the same width throughout; the upper wisdom-tooth of the right side has been arrested in its development, by having its crown above the posterior inner fang of the second molar. The calvarium is awry, and is shortened by parieto-occipital flattening on the right side.

Measurements of this skeleton will appear in Appendix B.

2. 814. Tannese. ♂, æt. e. 25. Calv.

A69, B19·2, C14·3, a4·7, b5·2, c4·4, D14·3, E6·7, F5·2p, a4·1, b4·9, c4, G5·7, a4·6, b4·9, c4, I5·3, J·77, K·85.

The alisphenoids have only a slight conjunction with the parietals, there being a triquetral ossicle in the right suture. It is asymmetrical from parieto-occipital flattening on the left side.

The lower jaw was stolen out of Mr. MACGILLIVRAY's house, by a dog, whilst the skull was being prepared. Died at Eramanga, Sept. 1859.

3. 815. Tannese. ♂, æt. e. 30.

A72, B20·3, C14·4, a4·6, b5, c4·8, D13·4, E7·2, F5·2t, a4·4, b4·9, c4·2, G5·2, a4·2, b4·5, c4·3, H4·2, I5·3, J·72, K·72.

The alisphenoid is totally cut off from the parietal on both sides. This fine skull is labelled "male" by Mr. MACGILLIVRAY; but it has some of the indications of the skull of a woman.

4. 574. Eramangan. ♂, æt. e. 40. *Island of Eramanga.*

A69, B19·8, C14·5, a4·5, b5, c5, D14·3, E6·9, F5t, a4·4, b4·7, c4·1, G5·5, a4·6, b4·9, c4·2, H4·7, I5·3, J·72, K·79.

The spheno-parietal sutures are very short, the right containing a Wormian ossicle.

5. 575. Eramangan. ♀, æt. e. 20. *Island of Eramanga.*

A71, B19·7, C14·6, a5, b5·3, c4·3, D14, E7, F5p, a4·3, b4·6, c4, G5·5, a4·7, b4·8, c4, H4·3, I4·9, J·71, K·78.

Has a Wormian ossicle in the right spheno-parietal suture.

6. 817. Fatean. ♂, æt. e. 30. *Fate, or Sandwich Island.*

A79, B21, C16·4, a5·2, b5·2, c6, D15·1, E7·7, F5p, a4·3, b4·6, c4·1, G5·8, a5, b5, c4·5, H4·7, I5, J·65, K·75.

This is perhaps the finest and most characteristic specimen of that specific type of skull met with among these races, and not to be found in any other part of the world. Its extraordinary length, narrowness, and height are seen by the measurements. Fa4·3, b4·6, c4·1 are very unusual dimensions. C16·4 with F5 would not occur in any *normal* cranium of another race; indeed it indicates the measurement of a scaphocephalic skull, although the sutures are all patent in this admirable example. Here *scaphocephalism* becomes as it were a race-character. The cranium is very prognathous; the teeth have the Australian

magnitude, and the mouth is very large; the narrow nasals, prominent at the lower extremities, are raised upon broad and elevated processes of the superior maxillary, and are surmounted by a thick supraciliary ridge. Those who can persuade themselves that all races of men are mere varieties, deduced by some legerdemain process from one original, would have endless search to make in European ossuaries before they met with an example like this.

7. 818. Fatean. ♂, æt. c. 30. *Fate*, or *Sandwich Island*.
A66, B19·3, C13·6, a4·5, b4·7, c4·4, D13·9, E6·6, F5·3p, a4·2,
b4·8, c4, G5·1, a4·3, b4·6, c4·1, H5, I5·2, J·80, K·77.

A remarkably and exceptionally low, prognathous skull, with inordinately large mouth and jaws; in its general form closely resembling the elongated distorted crania of the ancient Peruvians, but without any artificial deformation. The alisphenoids are wholly excluded from the parietals. The most pithceoid cranium in the Collection. The very *beau idéal* of the skull of a savage¹.

8. 819. Fatean. ♂, æt. c. 30. *Fate*, or *Sandwich Island*.
A69, B20, C14·8, a5, b5·4, c4·4, D14·4, E7·2, F5p, a4, b4·5,
c3·9, G5·6, a4·6, b4·7, c4, H4·7, I5·1, J·69, K·77.

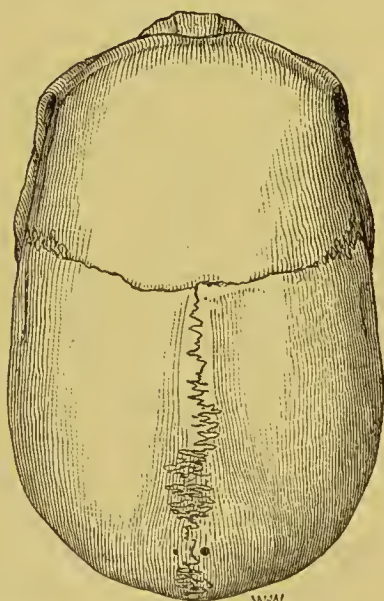
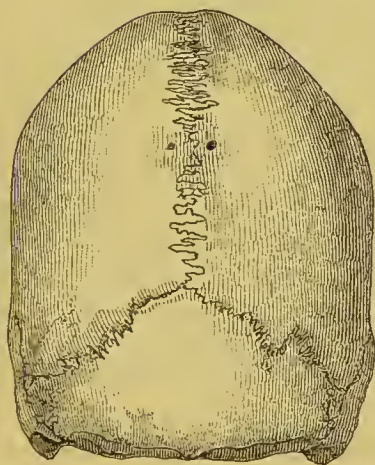
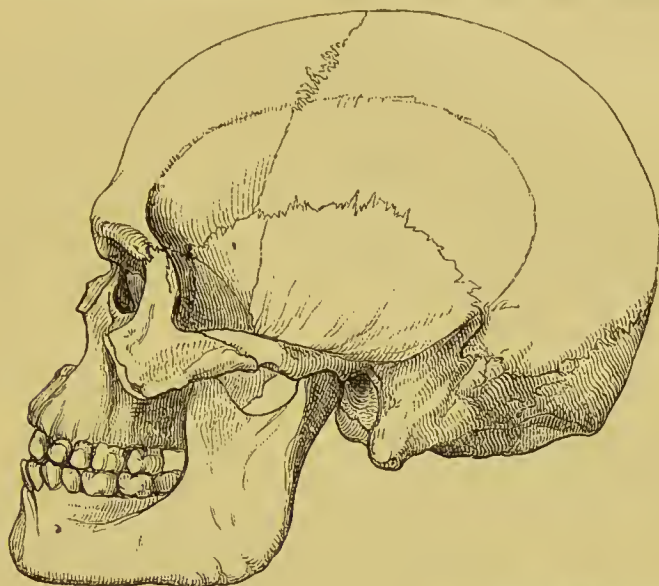
Another of the peculiar and characteristic crania of these islands, closely resembling No. 817.

¹ *Op. cit.* pl. ii. figs. 1, 2. At p. 6, it is there said that *all* the series is dolichocephalic. This is a misstatement; Nos. 685† and 818 are brachycephalic. Prof. OWEN, the distinguished zoologist, has more than once expressed the opinion that prognathism is "probably concomitant with late weaning of the infant" (*Anatomy of Vertebrates*, ii. 566). Such a view is quite in agreement with zoological doctrines generally held, and which have culminated in Darwinism, &c. Were there any truth in this assumed pliancy in animal forms, it is unnecessary to say that we should find it manifested in a thousand different ways. It would be reasonable to expect that prolonged suckling of individual European children would produce some effect, doubtless not that hereditarily cumulative result which the proposers of such hypotheses presume to obtain by mixing up with them the *mystery* of vast ages. Have we any right to conclude that African mothers suckle their children longer than any others? The practice is common among aboriginal peoples generally. BOSMAN says, "the Negro mother gives the infant suck for two or three years" (*Descr. of Coast of Guinea*, 104). In the series of original Drawings of North-American Indians by CATLIN, before alluded to, is one of the Sioux. In this is represented WA-NA-DETUNK-A, a Chief of a Band on the Upper Mississippi, with his Wife and Child. The latter is a stout boy four years old, with his bow and arrows, which he holds in one hand, in order to climb up on his mother's foot to reach her breast, that he may suck. This late weaning was common among the North-American Indians; and yet who ever discovered that they were remarkably prognathous? In Capt. C. F. HALL's *Life with the Esquimaux*, vol. ii. p. 93, he remarks, "As I stood gazing upon the scene before me, ANNAWA's big boy was actually *standing* by his mother and sucking at the breast, she all the time continuing her work." The prognathousness of the flat-faced Esquimaux has not yet been observed by any Arctic traveller.

This skull of the Fatean is distinguished among the hypsi-stenocephalic series for the magnitude of its fine teeth, a trait common to the series. See *The Teeth in Man and the Anthropoid Apes*, by Francis C. WEBB, M.D.

9. 820. Apeean. "Kilāla." ♂, æt. e. 25. *Island of Api, or Apee.*
A68, B19·8, C15·4, a5·3, b5·7, c4·4, D14·4, E7·1, F4·7p, a4·1,
b4·5, c4, G5·4, a4·8, b4·8, c4, H4·1, I4·9, J·66, K·76.

Another prognathous, remarkably seaphocephaloid skull,
having a frowning supraciliary ridge projecting over its short face¹.



Figs. 89-91.—Cranium of "Kilāla," Apeean.—No. 820.—Third-size.

10. 1215. Aneitean. "NITH-JINNIN." ♂, æt. e. 60. *Island of Aneiteum.* Calv.

A78, B20·5, C15·1, a4·7, b5·4, c5, D14·1, E7·4, F5·1, a4·2,
b4·5, c4·4, G5·4, a4·6, b4·8, c4·2, I5·5, J·68, K·73.

The sutures are very much ossified, even those of the bony

¹ *Op. cit.* pl. iii. figs. 1, 2, 3.

palate, except the squamous and those surrounding the alisphenoids. The teeth are all absent, the two last molars, on both sides, having been lost by disease before death. He was elubbed; there is a fracture, with depression, on the posterior part of the left parietal. The basilar portion of the occipital has been broken out to extract the brain.

Presented by Rear-Admiral H. M. DENHAM, F.R.S., of H.M.S. 'Herald,' by whose hydrographical labours the fine Chart of the Island of Aneiteum was constructed. *Aneiteum, or Annatom*, fol., 1862; *Admiralty Charts*. The calvarium was given to Admiral DENHAM by Rev. Jno. GEDDIE.

Average measurements of 9 skulls of New Hebridean men from different islands. A72, B20, C14·7, a4·9, b5·2, c4·7, D14·3, E7, F5·1, a4·2, b4·7, c4, G5·4, a4·6, b4·7, c4·1, H4·5, I5·2, J7·2, K77.

x. RACES OF THE FEEJEE ISLANDS.

1. 233. Feejeean. ♀, æt. e. 25. *Island of Ovalau*.

A66·5, B19·5, C15·1, a4·9, b5·1, c5·1, D13·6, E7·2, F4·8p, a4·1, b4·5, c3·8, G5·3, a4·4, b4·7, c4·3, H4·2, I4·7, J·66, K73.

Wormian ossicle in the right speno-parietal suture.

2. 234. Feejeean. ♀, æt. e. 16. *Island of Ovalau*.

A69, B19·2, C14·7, a5, b5, c4·7, D13·6, E6·9, F5p, a4·3, b4·5, c3·9, G5·2, a4·5, b4·6, c3·8, H4, I4·6, J·71, K75.

Nos. 233 and 234 were collected by Mr. MACGILLIVRAY, Surg. H.M.S. 'Herald.'

3. 383. Feejeean. ♂, probably of early life. Imperf. calv.

Each speno-parietal suture has a triquetral ossicle in it. The left temporal and a portion of the parietal and occipital have been broken away by violence.

4. 384. Feejeean. ♂, æt. e. 15. Imperf. calv.

B19·7, C14·7, a4·9, b4·9, c4·9, D14·8, E6·9, F5·5p, b5, c4·1, G5·6, b5, c4, J·79, K81.

A portion of the left side of the frontal and of the left parietal has been broken away by violence.

The position and appearance of the fractures in these two skulls render it most probable that they have both been "elubbed" during life, by blows given with the right hand.

5. 385. Feejeean. "KO MAYA LEVU AKAI DRADRAMEA." ♂, æt. e. 30.

Fragment of eranium and lower maxilla, consisting of the right half of the faeial bones, the frontal, and the greater part

of the parietals. Inscribed with the name given above (which I cannot explain further than that *Ko* is a prefix to proper names and *levu* means great),—and further, “eaten at *Lekutu*, back of the land, in January 1855.” He was a Chief.

Nos. 383, 384, and 385 presented by Rear-Admiral H. M. DENHAM, R.N., and Mr. J. D. MACDONALD, Surg. R.N., of H.M.S. ‘Herald.’

Reference.—DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 33. figs. 1, 2, 5, 6.

In concluding the remarks upon this very rare and very interesting series of skulls from the Salomon Islands, New Caledonia, the Loyalty Islands, the New Hebrides, and the Feejees, I wish to recall the attention of the reader to the great prevalence among them of long, narrow, and high calvaria, by which they are decidedly and distinctly characterized. But, notwithstanding this, brachycephalic crania occur among them. In Nos. 235, 237, 386, 682, 683, 812, 813, 810†, 811, 816, 815, 574, 575, 817, 819, 820, 233, 234 the proportion J ranges between .64 and .74; in three examples (Nos. 236, 684, and 814) there is an approach to brachycephalism, and in Nos. 1159, 685†, and 818 J rises from .80 to .85. In the two first of these examples, art has interfered with the natural form of the calvarium. The occurrence of these calvaria has an important bearing upon brachycephalism and its value as a race-character. In a race or series of races distinguished above all others for the length and narrowness of their skulls—in other words, for their dolichocephalism, skulls are met with decidedly brachycephalic, which bear evident marks of artificial interference. The inference is inevitable, that wherever any artificial deformation of the occipital region is known to obtain, the greatest caution must be exercised before the race in which it occurs can be admitted to be brachycephalic. Here art and, in the case of No. 685†, no large amount of artificial interference, has most completely transferred a skull from one class to the opposite; hence its influence must be very considerable, and it must be an element of far more weight and importance than craniologists have hitherto esteemed it to be.

F. RACES OF THE POLYNESIAN ISLANDS.

382. Polynesian. ♂, æt. c. 40. Island unknown.

A83, B21, C16, *a*5·4, *b*5·6, *c*5, D15·2, E7·6, F5·3*p*, *a*4·4, *b*4·8, *c*4·1, G5·9, *a*4·8, *b*5, *c*4·2, H5·1, I5·4, J·69, K·77.

This very fine skull of a Polynesian was presented with the three last Feejeeans.

a. RACES OF NEW ZEALAND. MAORIS.

1. 15. Maori. ♂, æt. e. 30. Calv.

A72·5, B20, C14, *a*4·9, *b*4·5, *c*4·6, D14·6, E7, F5·5*t*, *a*4·5, *b*5·1, *c*4, G5·6, *a*4·5, *b*4·7, *c*3·9, I5·6, J·78, K·80.

Has prominent aquiline nasals. The right outer ineisor has an irregularity in its development, a distinct tubercle growing on the inside of its crown, so as to convert it in a certain degree into a bicuspid.

2. 16. Maori. ♀, æt. e. 18. Calv.

B19·9, C*a*5, *b*5, D14·4, E6·8, F5·6, *a*4·8, *b*5·1, *c*3·8, G4·7, *b*4·8, *c*3·7, I5·1, J·82, K·69.

Has a Wormian bone in the right spheno-parietal suture, and the outer table is removed in spots on the frontal and left parietal by caries. The occipital bone has been broken away to extract the brain.

These calvaria belonged to a tribe ("Ngatitione") massacred by "TE RAUPERAHA" and "RANGIHAIATA."

3. 156. Maori. "GIGGERAGOU." ♂, æt. e. 80.

A69, B19·9, C14·3, *a*4·8, *b*4·9, *c*4·6, D13·8, E7, F5·1*t*, *a*4·2, *b*4·5, *c*4, G5·5, *a*4·5, *b*4·7, *c*4, I5·3, J·72, K·78.

"Giggeragou" was a very aged chief of the Wairou, in the middle island. The lower alveoli are greatly absorbed. The skull has been used as a trophy, being attached for a long time to the top of a pole near the Pah, so that its outer table has perished a good deal by the weather.

Presented by Mr. Henry SEYMOUR, of Nelson.

4. 157. Maori. ♂, æt. e. 60. *Ngatiawa Tribe*. Calv.

A68, B19·8, C14·4, *a*4·9, *b*4·7, *c*4·8, D14·4, E7, F5·4*p*, *a*4·3, *b*4·7, *c*4·2, G5·5, *a*4·5, *b*4·7, *c*4·1, I5·4, J·77, K·78.

Has a triquetral ossicle in the right spheno-parietal suture. The teeth are worn down to mere stumps by the rudest attrition, exposing the dentine and pulp-cavities of the molars.

This calvarium of the "bold and adventurous Ngatiawa," of the neighbourhood of Taranaki, was presented by Sir Geo. GREY, Governor of New Zealand.

5. 669. Maori. ♂, æt. c. 40

Preserved head, probably of a Chief of middle age, fully tattooed. The black flowing hair, scanty beard, and brownish moustaches are finely preserved. The lobes of the ears have been bored.

Presented by Prof. John GOODSIR, M.D., F.R.S.

6. (792.) Maori. ♂, æt. c. 40.

Preserved head, probably of a Chief of middle age, fully tattooed. The hair is browner and more crisp; the very slight remnant of beard and moustaches lighter than in No. 669.

7. 793. Maori. ♂, æt. c. 40.

Preserved head, most likely of a Chief of middle age, fully tattooed. Has beautiful flowing hair like No. 669.

8. 799. Maori. ♂, æt. c. 60.

A76, B20·5, C15·7, a5·7, b5·3, c4·7, D15·3, E7·3, F5·3t, a4·5, b4·4, c4·2, G5·9, a5·1, b5·2, c4·2, H4·5, I5·4, J7·2, K80.

This remarkably fine but heavy skull is affected with caries of the left upper *alveolus*.

9. 800. Maori. ♂, æt. e. 65.

A78, B20·7, C14·5, a4·8, b5·2, c4·5, D14, E7·3, F5·2t, a4·5, b4·9, c4·1, G5·5, a4·6, b4·8, c4·3, H4·2, I5·4, J7·1, K75.

The teeth of both jaws are fearfully worn down; yet the lower wisdom-tooth on the right side has its crown fresh and perfect, from the opposing tooth having been lost early. A fine large skull, which had received two serious injuries in life, at the back of the head, on the occipital, and right parietal, most likely from the blows of a meri.

Nos. 799 and 800 presented by Mr. C. P. LAYARD.

10. 848. Maori. ♂, æt. e. 60.

D.C.

B20, Ca5·5, b5, D15·1, E7·1, F5·4p, a4·3, b5·1, c4, Ga4·9, b5, c4·1, H4·8, I5·4, J7·6.

This skull has been obtained from one of the prepared heads, and is imperfect at the base.

11. 929. Maori. ♂, æt. e. 60. *Mercury Bay*. Calv. D.C.

B20·3, C14·5, a5, b4·8, c4·7, D14·7, E6·9, F5·6t, a4·3, b5·2, c4·2, G5·9, a4·7, b5, c4, J81, K85.

12. 930. Maori. ♀, æt. above 60. *Mercury Bay*. Calv. D.C.

A62, B20, C14·2, a4·9, b4·7, c4·6, D14·2, E7·1, F5·2t, a4·1, b4·5, c4·2, G5·1, a3·8, b4·5, c4, J71, K70.

13. 1412. Maori. ♂, æt. c. 35.

V.L. d. J.

Very fine specimen of the prepared head of a man in the vigorous period of life, elegantly tattooed. Has a reddish moustache, a curly beard, ascending on the sides of the face, and abundant, rather crisp and curly hair of a dark-brown colour. The eyebrows and some of the eyelashes are retained. The lobes of the ears have been pierced for earrings. The skin is of a pale tawny colour (No. 40 of Prof. BROCA's *Tableau Chromatique*).

14. 1413. Maori. ♂, æt. e. 35.

V.L. d. J.

Another still finer example of a preserved head, more elaborately tattooed, of a man of about the same age. Has only a few scattered hairs of beard and moustache of a yellow colour. Hair of the head abundant, lank, and flowing, of a dark-brown colour, at the ends reddish. Skin a shade more tawny in colour. The lobe of the left ear only has been pierced. The tattooing has been completed on the cheeks and the forehead. These are the heads of Chiefs.

Average measurements of 7 skulls of Maori men. A72·7, B20·1, C14·5, *a* 5, *b* 4·9, *c* 4·6, D14·5, E7, F5·3, *a* 4·3, *b* 4·9, *c* 4·1, G5·6, *a* 4·6, *b* 4·8, *c* 4, H4·5, I5·4, J·75, K·80.

References.—BLUMENBACH, *Dec. Cran.* lxx. (this plate, one of the five which I discovered at Göttingen, where they had been got in readiness by BLUMENBACH before his decease, represents a very fine prepared head in the Göttingen Collection). VIMONT, *Traité de Phrén.* pl. exv. fig. 2. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 32. figs. 3, 4, 5, 6.

XXVI. RACES OF THE SOCIETY ISLANDS. TAHITIANS.

310. Raiatean. ♀, æt. e. 30. *Island of Raiatea.* Imperf. calv. B20·2, C15·1, *a* 5, *b* 5·1, *c* 5, D14·2, E7·3, F5·4*p*, *a* 4·4, *b* 5·1, G5·6, J·74.

This calvarium was obtained at the celebrated Marai, at Opoa in Raiatea; it was the last remaining of thousands. The young woman to whom it belonged has evidently been offered as a victim to the gods. The occipital and sphenoid on the left side have been fractured, and the temporal wholly removed by great violence.

Presented by B. Toup NICHOLAS, Esq.

311. Eimeoan Chief. ♂, æt. e. 60. *Island of Eimeo.* A76, B21, C15·1, *a* 5·2, *b* 5·2, *c* 4·7, D15·4, E7·1, F5·6*p*, *a* 4·4, *b* 5·2, *c* 4·5, G6, *a* 4·8, *b* 5·1, *c* 4·3, H5, I5·5, J·78, K·84.

The coronal suture is almost obliterated, the sagittal less so, and the internasal is quite oblique. Presents the *processus papillares* of Prof. H. J. HALBERTSMA, and constitutes his Form D of the *condylus tertius* of J. F. MECKEL, *De derde Gewrichtsknobbel* (eond. tert.) *van het Achterhoofdsbeen*, pl. ii. fig. 2. Bears a mark of serious injury inflicted during life on the right side of the frontal.

This fine and rare skull was secretly obtained at an ancient burial-place in a secluded spot in the interior of the island of Eimeo, to which the bones of Chiefs were finally removed after

having been provisionally interred on the coast. In this place were many human bones in a decayed state.

Presented by Consul G. C. MILLER.

References.—BLUMENBAEH, *Dec. Cran.* Tab. xxvi.; *De Gen. Hum. Var.* Tab. ii. 4. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 30. BOURGAREL, *Bull. de la Soc. d'Anthropol.* i. pl. x.

1001. Bolabolan. ♂, æt. c. 60. *Island of Bolabola.* Imperf. calv. D.C.

A74, B19·8, C14·6, a4·9, b4·7, c5, D14·8, E6·9, F5·4p, a4·6, b4·9, c4, G5·8, a5, b5·1, c4·4, J·78, K·84.

b. RACES OF THE GAMBIE ISLANDS.

951. Gambier Islander. ♂, æt. e. 40. Calv. D.C.
A75, B20·5, C15·2, a5·3, b5·2, c4·7, D15·2, E7·2, F5·2p, a4·3, b4·5, c4·1, G5·7, a4·9, b4·9, c4·1, I5·3, J·72, K·79.

Has a large triangular epaetal bone, which embraces the whole scaly portion of the occipital; is very thick, and the outer portions of the coronal suture are obliterated. The rest of this suture, the sagittal, and much of the lambdoid are also ossified, yet the crowns of the teeth are quite fresh.

Inscribed, in a hand which I believe is that of Joshua BROOKES, F.R.S., "Presented by A. COLLIE, Surgeon, R.N. Gambier's Group."

Reference.—DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 28.

c. RACES OF THE MARQUESAS ISLANDS.

1. *Noukahivan.*

579. Noukahivan. ♀, æt. e. 25. *Island of Noukahiva.*
A71, B19·9, C13·8, a5, b4·3, c4·5, D14·4, E6·8, F5·6p, a4·3, b5·2, c4·2, G5·3, a4·4, b4·6, c4·2, H4·8, I5·1, J·82, K·77.

On the left side the alisphenoid is cut off from the parietal; on the right there is a Wormian ossicle intervening between them. Of all the wisdom-teeth (*m.* 3) one only, the lower on the left side, is developed. This very singular eranium has much the appearance of having been distorted by art. According to GOSSE's rule for testing the interference of art (*Déformations artificielles du Crâne*, p. 7), the perpendicular line descending from the point of junction of the sagittal with the coronal suture falls *decidedly behind* the external auditory opening. And the skull approaches much to the form of his *tête trilobée*. Still, as the natural conformation of the eranium of the Marquesans and Kanakas is what may be denominated *latiparietal*, i. e. wide

between the parietal tubers, and as there are no obvious marks of artificial compression, I feel in doubt whether the skull has been interfered with. If pressure has been employed, it must have been applied in the manner of the Ancient Peruvians, by means of a circular bandage, and that without compressing the parietal tuberosities—probably in the mode used by the Caribs of St. Vincent, figured by GOSSE, pl. vi. fig. 3. The frontal and occipital appear as if they had been flattened, and the calvarium is lengthened; the parietals and temporals bulge out at the sides.

Presented by Consul G. C. MILLER.

BOURGAREL, *Bull. de la Soc. d'Anthrop.* i. pl. xi.

2. *Fatuhivans.*

1. 782. *Fatuhivan.* ♂, æt. e. 35. *Island of Fatuhiva.* Calv.
A84, B21·3, C15·4, *a*5·5, *b*5·2, *c*4·7, D16, E7·4, F5·7*p*, *a*4·6,
*b*5·3, *c*4·5, G5·9, *a*5·1, *b*5·2, *c*4·2, I5·6, J·77, K·79.

2. 783. *Fatuhivan.* ♂, æt. e. 35. Calv.
A88, B21·2, C15·4, *a*5·3, *b*5·3, *c*4·8, D15·5, E7·5, F5·7*p*, *a*4·7,
*b*5·3, *c*4·6, G5·6, *a*5·1, *b*5·1, *c*4·2, I5·3, J·76, K·74.

3. 784. *Fatuhivan.* ♂, æt. e. 35. Calv.
A78, B20·6, C14·9, *a*5·2, *b*5·2, *c*4·5, D14·3, E7·3, F5·3*p*, *a*4·4,
*b*4·8, *c*4·5, G5·5, *a*4·7, *b*4·9, *c*4·2, I5·5, J·72, K·75.

Has nodular exostoses on the insides of the external auditory canals, and has the prolongation of the external pterygoid process on the left side, described by HYRTL. This is a synostotic calvarium from premature ossification of the sagittal suture, which is perfectly obliterated. It is decidedly *klinocephalic*, an abnormal form attributed by VIRCHOW and LUEKE to obliteration of the spheno-parietal sutures, both of which are open in this example¹.

4. 785. *Fatuhivan.* ♂, æt. e. 25. Calv.
A86, B21·1, C15·3, *a*5·3, *b*5·3, *c*4·7, D15, E7·4, F5·7*p*, *a*4·6,
*b*5·3, *c*4·6, G5·7, *a*4·8, *b*5, *c*4·3, I5·5, J·74, K·74.

5. 786. *Fatuhivan.* ♂, æt. e. 65. Calv.
A86·5, B21·8, C16, *a*5·2, *b*5·3, *c*5·5, D15·6, E7·8, F5·5*p*, *a*4·7,
*b*4·8, *c*4·6, G5·6, *a*5, *b*5·3, *c*4·7, I5·4, J·70, K·71.

In this big, heavy calvarium the sutures of the vault are almost closed, which renders it probable that its owner was of advanced age. The two middle incisors have been punched out in early life.

¹ J. Barnard DAVIS, *On Synostotic Crania among Aboriginal Races of Man*, p. 29.

6. 787. Fatuhivan. ♂, æt. e. 50. Calv.

A80, B20·4, C14·4, a4·8, b5, c4·6, D14·7, E7, F5·6p, a4·5, b5·1, c3·9, G5·5, a4·7, b4·9, c4·4, I5·3, J·80, K·78.

Three of the front incisors have been punched out in early life.

7. 788. Fatuhivan. ♂, æt. e. 30. Calv.

A73, B20·3, C14·5, a5·4, b4·6, c4·5, D14·6, E7·1, F5·7p, a4·4, b5·2, c4·4, G5·3, a4·7, b4·7, c3·9, I5·4, J·80, K·74.

8. 789. Fatuhivan. ♂, æt. e. 17. Calv.

A91, B21, C15·4, a5·3, b5·4, c4·7, D15·8, E7·4, F5·6p, a4·6, b5, c4·6, G5·9, a5, b5·1, c4·4, I5·3, J·75, K·79.

This calvarium of a young subject is very large, thin, and in appearance swollen out, as if it had been hydrocephalic. It is also synostotic, the sagittal suture being totally obliterated; yet the calvarium is not *scaphocephalic*, nor indeed deformed in any way.

9. 790. Fatuhivan. ♀, æt. e. 20. Calv.

A68, B19·2, C14·2, a4·9, b4·6, c4·7, D14·2, E6·5, F5·6p, a4·3, b5·2, c4·2, G5·3, a4·7, b4·9, c4, I5·1, J·86, K·81.

Has slight indications of the *processus papillares* of HALBERTSMA.

10. 791. Fatuhivan. ♀, æt. e. 20. Calv.

A65, B19, C13·7, a5, b4·2, c4·5, D14·6, E6·4, F5·5p, a4·4, b5·1, c3·8, G5·4, a4·7, b4·8, c3·9, I4·9, J·85, K·84.

11. 792. Fatuhivan. ♀, æt. e. 16. Calv.

A72·5, B20, C14·6, a5·1, b4·8, c4·7, D14·5, E7, F5·7p, a4·4, b5·3, c4·1, G5·5, a4·5, b4·8, c4·1, I4·7, J·81, K·78.

These three calvaria of women exhibit less supra-occipital prominence than those of the men, less of GALL's *philoprogenitiveness*.

Nos. 782 to 792, forming a very fine collection of Fatuhivan calvaria, were presented by Mr. THOS. C. LAWSON, of Uahuga.

3. Ohivaoans.

1. 1132. Ohivaoan. ♂, æt. e. 50. *Island of Ohivaoa, or Dominica of MINDANA. Tafati Tribe.*

A79·5, B20·5, C15·1, a5·1, b5·3, c4·7, D15·7, E7·1, F5·6p, a4·4, b5·3, c4·4, G5·7, a4·8, b5, c4·2, H5, I5·3, J·78, K·80.

This fine massive skull of an Ohivaoan exhibits nodular exostoses in the external auditory canals, and another exostosis on the fore part of the left condyle of the lower maxilla.

2. 1134. Ohivaoan. ♀, æt. e. 40. *Tafati Tribe.* Calv.

A65, B19·7, C14·3, a4·7, b4·8, c4·8, D13·6, E6·9, F5·2p, a4·2, b4·7, c3·8, G5, a4·4, b4·6, c3·9, J·75, K·72.

3. 1135. Ohivaoan. ♀, æt. c. 13. *Tafati Tribe*. Calv.
A73, B19·8, C14·4, a4·8, b5, c4·6, D14·7, E6·9, F5·8p, a4·4,
b5·5, c4·4, G5·2, a4·6, b4·9, c4, I4·4, J·84, K·75.

A large, smooth, latiparietal calvarium, perhaps hydrocephalic.

4. 1136. Ohivaoan. ♂, æt. c. 50. *Tafati Tribe*.
A69·5, B19·6, C14, a4·7, b4·8, c4·5, D14·6, E6·7, F5·4p, a4·4,
b5·1, c4·1, G5·4, a4·4, b4·6, c3·8, H4·6, I5·2, J·80, K·80.

5. 1137. Ohivaoan. ♀, æt. c. 50. *Tafati Tribe*. Calv.
A64, B19·8, C14·3, a4·7, b5, c4·6, D14·1, E7, F5·2p, a4·2,
b4·6, c4·1, G5·2, a4·5, b4·7, c4·2, I5, J·74, K·74.

6. 1138. Ohivaoan. ♂, æt. c. 70. *Tafati Tribe*.
A74, B20·1, C14·4, a5, b5, c4·4, D14·8, E6·8, F5·6p, a4·7,
b5·3, c4·1, G5·6, a4·7, b4·9, c4, H4·6, I5·1, J·82, K·82.

This skull also (like No. 1132) exhibits an exostosis on the fore part of the left condyle of the lower jaw. It is large and has an articulation with the eminence before the glenoid cavity, so as to prevent the condyle from passing into that cavity.

7. 1139. Ohivaoan. ♀, æt. c. 25. Calv.
A81·5, B20·5, C15, a5·1, b5·1, c4·8, D15·3, E7·1, F5·8p, a4·6,
b5·2, c4·1, G6, a4·9, b5, c4·4, I5·1, J·81, K·84.

Has a large triquetral bone in the right spheno-parietal suture. This calvarium was picked up in the bay of Hanatekua, lying on the ground.

8. 1140. Ohivaoan. "POFEE," or "POFII." ♂, æt. c. 38. *Tafati Tribe*. Calv.
A79, B19·5, C14, a6, D14·9, E6·4, F5·3p, a5·2, b4·6, c4,
G5·8, a5·3, b5·1, c3, I5·6, J·82, K·90.

This extraordinary calvarium presents a very unusual combination of ossified sutures. The sagittal is totally effaced, there being a narrow ridge running along the line of the suture, in the middle of its length. Almost the whole of the lambdoid is obliterated, nearly to the commencement of its *additamenta*. The coronal, squamosals, and other sutures are free. There are triquetral ossicles in the spheno-parietal sutures. The result of these premature synostoses is a calvarium broad, high, and capacious in the frontal region, from compensatory development; narrow and very short in the parietal region, and as if cut off almost perpendicularly a little behind the middle length of the parietals. It is a very brachycephalic skull. Both VIRCHOW and LUCÆ designate synostosis of the parietals with the scaly portion of the occipital *pachycephalus*. To this must be added, in the skull of "POFII," the very early and perfect fusion of the parietals at the sagittal suture, which has arrested the develop-

ment of the cranium in the parietal region, so as to produce stenocephalism here.—J. Barnard DAVIS, *On Synostotic Crania among Aboriginal Races of Man*, 4to, 1865, p. 17, with a fine profile figure of "POFI's" skull (pl. vii.).

9. 1141. Ohivaoan. ♀, æt. c. 40.

A68, B19·6, C14·1, a4·7, b4·5, c4·8, D14·2, E6·9, F5·3p, a4·2, b4·9, c3·9, G5·4, a4·5, b4·7, c4·1, H4·6, I4·9, J·76, K·78.

This heavy skull is that of the wife of "POFEE," who was of the "Nachiki" Tribe, of the Valley of Atuono, island of Hivaoa. She had red hair, was very pretty, and died in 1860 or 1861.

10. 1141a. Ohivaoan. ♂. Left femur of an Ohivaoan man, 18·2 inches long.

4. Uahugans.

1. 593. Uahugan. ♂, æt. c. 60. *Island of Uahuga*. Calv.

A76·5, B20·5, C14·8, a5·1, b4·9, c4·8, D14·8, E7·2, F5·7p, a4·3, b5·3, c4·2, G5·5, a4·7, b4·9, c4·2, I5·5, J·79, K·76.

This heavy calvarium has a nodular exostosis in the right auditory canal, and exhibits signs, in the flattening out and roughening of the preglenoid tubercles, of probable disease in the condyles of the lower jaw.

2. 594. Uahugan. ♂, æt. c. 18. Calv.

A75, B19·7, C14·3, a4·8, b5, c4·5, D14·8, E6·9, F5·4p, a4·5, b5·2, c4·1, G5·5, a4·5, b4·9, c4, I5·3, J·78, K·79.

This calvarium has had the basal portion of the occipital broken away by violence.

3. 595. Uahugan. ♂, æt. c. 40. Calv.

A70·5, B19·8, C14·2, a4·9, b4·9, c4·4, D14·8, E6·7, F5·5p, a4·2, b5, c4·3, G5·6, a4·6, b4·8, c4, I5·2, J·82, K·83.

Has a triquetral ossicle in the right spheno-parietal suture, and a large paramastoid process on the left side, which has articulated with the atlas. Has the mark of an old injury in the coronal suture on the right side.

4. 596. Uahugan. ♂, æt. c. 18. Calv.

A76·5, B20·6, C14·9, a5, b5·2, c4·7, D15·3, E7·2, F5·7p, a4·5, b5·3, c4·3, G5·7, a4·9, b5·1, c4·3, I5·3, J·78, K·78.

5. 597. Uahugan. ♀, of middle age. Imperf. calv.

A71, B19·8, C14·5, a5·1, b5·2, c4·2, D14·3, E6·9, F5·5p, a4·8, b5, c4, G5·4, a4·8, b4·9, c3·9, J·79, K·78.

Although this calvarium has a frontal suture, yet, from the ossification of about an inch of each end of the coronal suture, it is klinocephalic.

6. 598. Uahugan. ♀, æt. c. 18. Calv.

A65·5, B19·1, C14, *a* 4·9, *b* 4·7, *c* 4·4, D14, E6·8, F5·2*p*, *a* 4·1, *b* 4·7, *c* 4·2, G5·3, *a* 4·4, *b* 4·6, *c* 3·9, I4·7, J·76, K·78.

7. 599. Uahugan. ♂, æt. c. 60.

A74, B20·5, C14·7, *a* 5·2, *b* 5, *c* 4·5, D14·6, E7·1, F5·5*p*, *a* 4·6, *b* 5·3, *c* 4·5, G5·5, *a* 4·7, *b* 4·9, *c* 4·2, H4·8, I5·1, J·77, K·77.

This interesting collection of Marquesan skulls, from the islands of Hivaoa and Uahuga, was presented by Mr. Thos. Clifton LAWSON, of the latter island.

5. Hiaouan.

781. Hiaouan. ♂, æt. c. 30. *Island of Hiaou, or Knox Island.*
Prepared Marquesan skull.

A68, B20·2, C14·5, *a* 4·8, *b* 5, *c* 4·7, D14·7, E7, F5·4*p*, *a* 4·3, *b* 5, *c* 4·3, G5·5, *a* 4·7, *b* 4·7, *c* 4, H5·2, I5·6, J·77, K·78.

A thick and heavy skull, distinguished by supramastoid ridges on each side, and by tuberosities on each side the occipital in the course of the superior semicircular ridge and at its outer extremities, marking the insertions of the *splenii* muscles. The temporal ridges ascend high on the parietals, so as to approach within 3 inches of each other.

This fine cranium has been prepared as a trophy in the manner of the Marquesan Islanders, by passing a neat cord, made of cocoa-nut fibres, round the crowns of the teeth to fix them in their sockets, and by attaching the lower jaw to the zygomatic arches with the same. Judging from the fine white fresh teeth, it has probably belonged to a Chief.

Presented by W. L. GREEN, Esq., Honolulu.

Average measurements of 16 skulls of men of the Marquesan Islands. A77, B20·5, C14·8, *a* 5, *b* 5, *c* 4·6, D15, E7·1, F5·5, *a* 4·5, *b* 5·1, *c* 4·3, G5·5, *a* 4·7, *b* 4·9, *c* 4·4, H4·8, I5·3, J·77, K·77.

Extremes, A68-91, J·70-82, K·71-83.

Eleven of the 16 skulls are dolichocephalic.

Average measurements of 11 skulls of women of the Marquesan Islands. A69·5, B19·6, C14·2, *a* 4·9, *b* 4·7, *c* 4·6, D14·3, E6·8, F5·4, *a* 4·3, *b* 5, *c* 4, G5·3, *a* 4·5, *b* 4·6, *c* 4, H4·7, I4·8, J·79, K·77.

Extremes, A68-88, J·74-86, K·72-84.

Average measurements of 27 skulls of Marquesan men and women. A73, B20, C14·5, *a* 4·9, *b* 4·8, *c* 4·6, D14·6, E6·9, F5·4, *a* 4·4, *b* 5, *c* 4·1, G5·4, *a* 4·6, *b* 4·7, *c* 4·2, H4·7, I5, J·78, K·77.

The greatest breadth, F, is invariably parietal.

References.—BLUMENBAEH, *Dec. Cran.* Tab. l., which appears

to have a supernumerary molar, although not mentioned by the author. ISENFLAMM, *Beschreib. einiger menschl. Köpfe*, 1813, Taf. 2. M. J. WEBER, *Ur- u. Racen-Formen der Schädel u. Becken des Menschen*, Tab. xix., xx. DUMOUTIER, *Voy. au Pôle Sud, Anthropologie*, Atlas, pl. 29. figs. 1, 2. The three figures of ISENFLAMM and DUMOUTIER are of skulls differently prepared. DUMOUTIER, on the same plate, gives figures of two unprepared crania, one of a "grand Ariki," or chief of Chiefs, the other of a child.

Mr. LAWSON has assured me that the natives of the Marquesas do not attempt to distort the heads of their children. Navigators have pretty unanimously acceded to Cook's admiration of the Marquesans, who speaks of them as "without exception the finest race of people in this sea. For fine shape and regular features, they perhaps surpass all other nations" (*Voy. towards the South Pole*, 1777, i. 308). These large fine crania give support to this statement. Their practice of tattooing is by far more elaborate than that of any other people. Among the men, who can afford it and whose constitution tolerates it, this ornamentation is continued till it embraces every portion of the skin, so that the entire body is covered with patterns. The women have far less pains bestowed upon them. M. Emile BLANCHARD gives a metrical comparison of the skulls of Marquesans with those of Europeans¹. The measurements of this Catalogue afford the means of a more complete comparison, not only with Europeans, but with other Pacific Islanders, from whom they differ materially. The crania of the group of islands embracing New Caledonia and the New Hebrides are strikingly distinct, and, if more than a geographical meaning be applied to the term Polynesian, it cannot with the slightest propriety be made to embrace two such differently organized and aboriginally distinct races. DUMOUTIER himself described the skulls of Noukahivans².

d. RACES OF THE SANDWICH ISLANDS. KANAKAS.

1. *Races of the Island of Owhyee.*

i. 307. Kanaka³. ♂, æt. c. 60.

A 80, B 20·8, C 15, a 5·3, b 5·5, c 4·2, D 16·4, E 6·9, F 6t, a 4·9, b 5, c 4·2, G 6·1, a 5·1, b 5·3, c 4, H 4·9, I 5·8, J 8·6, K 8·8.

This enormous skull has doubtless belonged to one of the

¹ *Voy. au Pôle Sud, Anthropologie*, p. 71.

² *Mém. de la Soc. Ethnol.* ii., xxxiv.

³ The term "Kanaka" is the name applied, by foreigners, to the natives of the Polynesian Islands generally. In the native language of the Sandwich Isles, Kānākā means a man; Kānākā, men generally. In the *Bulletins de la Société d'Anthropologie*, ii. 282, is a note from M. A. LESSON, brother of P. LESSON, the zoologist of the voyage of the 'Coquille.' In this note it is explained that the Polynesian term for *man* differs slightly in the different

gigantie Chiefs¹. He had had the left upper outer incisor punched out in youth. The alisphenoid does not meet the parietal on either side.

2. 308. Kanaka. ♂, æt. e. 40.

The dried integuments are still attached to the right side of this fine skull.

The ineonstaney of the posterior condyloid foramen of the occipital is exemplified in these erania (Nos. 307 and 308), where it is large on the right side, absent on the left.

3. 309. Kanaka. ♂, æt. e. 40.

The dried integuments, having a few locks of short dark-brown hair upon them, are still attached to the right side of the skull, where the skin of the face has a pattern stained upon it. The first four vertebræ are also remaining. The outer upper ineisor on the left side has been punched out in early life and the occipital region flattened².

Nos. 307 to 309 were obtained from a sepulchral cave, believed to be a century old or more, at Pookauka, Owhyee, by Rev. Julius L. BRENCHLEY, and presented by the gallant Gen. Wm. MILLER.

4. 349. Kanaka. ♀, æt. e. 40. Calv.

A71, B19·9, C14·4, a4·7, b5·3, c4·4, D14·5, E6·9, F5·6p, a4·6, b5·2, c3·9, G5·6, a4·8, b5, c3·9, I5, J·81, K·81.

Right outer ineisor punched out in early life. A *Kapa* beater was found at the side of this skeleton. It is the business of the women to beat *Kapa*, the native eloth.

5. 350. Kanaka. ♂, æt. e. 35.

A72, B20·4, C14·9, a5·2, b5, c4·7, D15, E7·3, F5·6p, a4·4, b5·3, c4·3, G5·7, a4·8, b4·9, c4·1, H4·7, I5·1, J·76, K·78.

Has the *processus papillaris* of HALBERTSMA on the left side, before the occipital foramen.

islands, being *kanaka* in the Sandwich Islands, *tangata* in New Zealand, and so forth. M. A. LESSON says he has always avoided the use of the word "Kanaka," as applied to Polynesians. It is in this Catalogue *restricted to the inhabitants of the Sandwich Isles alone*; still it must be allowed that M. A. LESSON'S caution is judicious. Kanaka is at times applied to Marquesan Islanders, and even to New Caledonians, a race that there cannot be any pretence to confound with Polynesians, even using this latter term in a very indiscriminate and comprehensive manner.

¹ Capt. COOK describes the superiority of the Chiefs physically; and Mr. W. L. GREEN has informed me that he had been told by "Old ADAMS," I conclude the patriarch so famous at Pitcairn's Island, that when he first arrived he had seen above one hundred Chiefs in one place, every one about 6 feet high.

² The Sandwich Islanders consider a broad flat occiput to be a decided mark of manly beauty. It is named *upoo-paraurau* (flattened head), and is produced by fixing the infant on its back, with the occiput on the surface of a flat piece of wood (GOSSE, *Déform. du Crâne*, p. 75).

6. 351. Kanaka. ♂, æt. e. 30. Calv.

A78, B20·5, C15·4, a5·5, b5·5, c4·4, D15, E7·3, F5·3p, a4·3, b4·9, c4·2, G5·8, a4·8, b5, c4, I5·5, J·72, K·79.

Nos. 349 to 351 were obtained in a cavern near Waimea, and were presented by W. L. GREEN, Esq.

7. 991. Kanaka. ♂, æt. e. 65. Calv.

D.C.

A78·5, B20·2, C15·2, a5·3, b4·7, c5·2, D15·5, E6·9, F5·7p, a4·8, b5, c4·9, G5·9, a5, b5, c3·8, I5·2, J·82, K·85.

A singularly wry calvarium, no part of which has escaped obliquity from parieto-occipital pressure. Even the external auditory canals are awry, the frontal bone considerably so.

“From Dr. HENDERSON in 1832.”

8. 1011. Kanaka. ♂, æt. e. 40. Calv.

D.C.

A81, B20·2, C14·4, a5·1, b5, c4·3, D15·3, E6·8, F5·6p, a4·5, b5·3, c4·2, G6, a4·9, b5, c3·8, I5, J·82, K·88.

Has nodular exostoses in the external auditory canals, and a triquetral ossicle in each spheno-parietal suture. The outer incisor on both sides has been punched out.

9. 1012. Kanaka. ♂, æt. e. 30.

D.C.

Retains the integuments over all the left side.

Nos. 1011 and 1012 were derived from a cave in Nov. 1839, by Rd. NORTON. The cave is in Kara Kakooa Bay, where Capt. Cook was killed.

2. Races of the Island of Oahu, or Woahoo.

10. 344. Kanaka. ♀, æt. e. 35.

A73, B20·1, C14·3, a5·2, b4·8, c4·3, D15, E6·9, F5·7p, a4·5, b5·4, c4·1, G5·5, a4·7, b4·9, c4·2, H4·2, I5·2, J·82, K·79.

11. 346. Kanaka. ♀, æt. e. 15.

A75, B19·5, C14·2, a4·9, b5·1, c4·2, D15·2, E6·4, F5·8p, a4·5, b5·6, c4·1, G5·5, a4·7, b4·9, c4, H3·7, I4·5, J·90, K·85.

12. 348. Kanaka. ♂, æt. e. 80.

A76·5, B20·8, C15·2, a5, b5, c5·2, D14·8, E7·5, F5·5p, a4·4, b5·2, c4·4, G5·8, a4·8, b4·9, c4, H4·4, I5·4, J·73, K·77.

Nos. 344 to 348 are from *Waialae*, near Honolulu.

13. 352. Kanaka. ♂, æt. e. 50. Calv.

A80, B20·7, C15, a5·1, b4·9, c5, D15·6, E7·3, F5·6p, a4·4, b5·2, c4·2, G5·7, a5, b5·2, c4·6, I5·1, J·76, K·77.

14. 353. Kanaka. ♀, æt. e. 16. Calv.

A78·5, B20·3, C15·1, a5·2, b5, c4·9, D14·8, E7·3, F5·5p, a4·5, b5·2, c4·1, G5·5, a4·9, b4·9, c4, J·75, K·75.

15. 354. Kanaka. ♀, æt. e. 10. Calv.

Nos. 352 to 354 from the sand at *Laicee*, N.W. side of the island.

16. 355. Kanaka. ♂, æt. e. 60.

A 89·5, B 20·7, C 15·3, *a* 5·5, *b* 5, *c* 4·8, D 16, E 7, F 6·1*p*, *a* 4·8, *b* 5·7, *c* 4·3, G 6, *a* 5, *b* 5·1, *c* 4·1, H 5, I 5·6, J 86, K 84.

All the upper ineisors have been punched out in early life. Has great parieto-occipital flattening.

17. 356. Kanaka. ♀, æt. e. 45.

A 65, B 19·7, C 14, *a* 4·7, *b* 4·5, *c* 4·8, D 14·2, E 6·9, F 5·4*p*, *a* 4·2, *b* 5·1, *c* 4, G 5·3, *a* 4·6, *b* 4·8, *c* 4·1, H 4·6, I 5·1, J 78, K 76.

The left zygomatic arch has been forcibly driven inwards during life. On the right side the temporal cuts off the alisphenoid from the parietal. The coronal, sagittal, and, in part, the lambdoid sutures are ossified, but the synostoses have not resulted in any deformation. They probably were not very early.

18. 357. Kanaka. ♀, æt. e. 30. Calv.

A 74, B 20·3, C 14·5, *a* 5, *b* 5, *c* 4·5, D 14·7, E 7·2, F 5·5*p*, *a* 4·4, *b* 5·3, *c* 4·2, G 5·2, *a* 4·6, *b* 4·8, *c* 4·2, J 76, K 72.

From an ancient cemetery.

19. 402. Kanaka. ♀, æt. e. 30.

A 68, B 19·7, C 13·8, *a* 4·8, *b* 4·2, *c* 4·8, D 15, E 6·7, F 5·5*p*, *a* 4·4, *b* 5·2, *c* 4·6, G 5·5, *a* 4·6, *b* 4·8, *c* 4·2, H 4·1, I 4·9, J 82, K 82.

The middle of the coronal, and the sagittal suture at its junction with the coronal are obliterated, but without deformation.

20. 403. Kanaka. ♂, æt. e. 40.

A 72, B 19·9, C 14·5, *a* 4·9, *b* 5·1, *c* 4·5, D 15·3, E 6·7, F 5·8*p*, *a* 4·3, *b* 5·4, *c* 4·1, G 6, *a* 4·8, *b* 5·1, *c* 4·1, H 4·4, I 5·1, J 86, K 89.

Coronal, sagittal, and lambdoid sutures are all greatly obliterated, yet without deformation from synostosis; still the skull exhibits parieto-occipital flattening.

21. 404. Kanaka. ♀, æt. e. 35.

A 85, B 21, C 15·8, *a* 5·5, *b* 5·5, *c* 4·8, D 14·2, E 7·4, F 5·5*p*, *a* 4·6, *b* 5·2, *c* 4·2, G 5·8, *a* 5·1, *b* 5·4, *c* 4·3, H 4·3, I 5·1, J 74, K 78.

22. 405. Kanaka. ♀, æt. e. 35.

A 67, B 19·3, C 14, *a* 4·9, *b* 4·9, *c* 4·2, D 14·9, E 6·7, F 5·6*p*, *a* 4·6, *b* 5·2, *c* 4·1, G 5·5, *a* 4·8, *b* 4·8, *c* 3·9, H 4·2, I 5, J 83, K 82.

23. 406. Kanaka. ♂, æt. e. 60.

A 78, B 20·8, C 15·2, *a* 5·1, *b* 5·1, *c* 5, D 15·2, E 7·4, F 5·4*p*, *a* 4·4, *b* 5, *c* 4·4, G 5·7, *a* 4·8, *b* 4·9, *c* 4·4, H 4·6, I 5·4, J 73, K 77.

The left parietal has had a longitudinal fracture nearly all its length, during life, through its middle and the protuberance.

24. 407. Kanaka. ♀, æt. c. 30.

A64, B19·2, C14·2, a4·8, b4·5, c4·9, D13·7, E6·9, F5·3p, a4·2, b4·8, c4·2, G5·3, a4·5, b4·7, c4·2, H4·2, I4·8, J·76, K·76.

25. 408. Kanaka. ♂, æt. c. 40.

A74, B20·4, C15·4, a5·4, b5·6, c4·4, D15·7, E7·2, F5·6p, a4·6, b5·2, c4·3, G6, a5, b5·3, c4·3, H4·6, I5·5, J·77, K·83.

The lower extremities of the coronal suture are obliterated.

26. 409. Kanaka. ♀, æt. c. 35.

A81, B20·4, C14·7, a5, b5·2, c4·5, D15·1, E7·2, F5·6p, a4·6, b5·3, c4·2, G6·1, a4·9, b4·9, c4·2, H4·2, I5·5, J·77, K·84.

27. 410. Kanaka. ♀, æt. c. 30.

A70, B19·6, C13·9, a4·5, b5, c4·4, D14·3, E6·7, F5·5p, a4·3, b5·3, c4, G5·5, a4·4, b4·7, c4, H4·3, I4·9, J·82, K·82.

28. 411. Kanaka. ♀, æt. e. 30.

A67, B19·7, C14, a4·6, b5, c4·4, D14·1, E6·9, F5·2p, a4·3, b4·7, c4, G5·5, a4·6, b4·7, c4, H4·3, I5·2, J·75, K·79.

29. 412. Kanaka. ♀, æt. c. 80.

A66·5, B19·2, C14·3, a5, b4·7, c4·6, D13·5, E6·7, F5·2p, a4·2, b4·5, c4·1, G5·5, a4·5, b4·6, c4, H3·8, I5·2, J·77, K·82.

Has the *processus papillares* of Prof. H. J. HALBERTSMA before the anterior edge of the occipital foramen. Very thin and light from senile atrophy.

30. 413. Kanaka. ♂, æt. c. 35. Calv.

A75, B20·5, C15, a5·3, b5·2, c4·5, D15, E7·2, F5·4p, a4·6, b5·1, c3·9, G5·6, a4·9, b4·9, c4, I5·1, J·75, K·77.

The lower portions of the coronal and the speno-parietal sutures are ossified, yet without consequent deformation. Has a large paramastoid process on the left side, which has articulated with the atlas.

31. 414. Kanaka. ♀, æt. e. 5.

32. 415. Kanaka. ♀, æt. c. 7.

Has indications of annular deformation, without any of the sutures being ossified.

Nos. 407, 411, 412, and 415 are from *Kahuka*.

33. 416. Kanaka. ♂, æt. c. 70. Calv.

A83, B21·7, C16·2, a5·5, b5·4, c5·3, D16, E7·7, F5·6t, a4·6, b5·2, c4·4, G6, a5·2, b5·3, c4·4, I5·6, J·72, K·77.

Has the *pneumatic processes* of HYRTL.

Nos. 402, 403, and 416 are from *Waialae*.

34. 417. Kanaka. ♀, æt. e. 18.

A73, B19·8, C14·1, *a*5, *b*5, *c*4·1, D14·8, E6·8, F5·6*p*, *a*4·8, *b*5·2, *c*3·8, G5·5, *a*4·7, *b*4·8, *c*3·8, H4·4, I4·8, J·82, K·80.

Has a frontal suture and the consequent breadth of forehead.

35. 418. Kanaka. ♀?, æt. e. 25.

A77·5, B20·4, C14·4, *a*5·2, *b*4·5, *c*4·7, D14·8, E7, F5·8*p*, *a*4·7, *b*5·4, *c*4·3, G5·7, *a*4·8, *b*5, *c*4·4, H4·6, I4·9, J·82, K·81.

Has a diamond-shaped interparietal bone, an inch in longitudinal diameter.

36. 419. Kanaka. ♀, æt. e. 25. Calv.

A73, B19·8, C14·1, *a*4·7, *b*5, *c*4·4, D14·3, E6·8, F5·4*p*, *a*4·5, *b*5, *c*4·3, G5·7, *a*4·5, *b*5, *c*4·2, I5, J·79, K·83.

The speno-frontal and -parietal sutures, with the temporal portions of the coronal, are ossified, producing great depression of the frontal bone, in the manner of the famous Neanderthal skull.

37. 420. Kanaka. ♀, æt. e. 30.

A70·5, B20, C14·5, *a*4·9, *b*4·8, *c*4·8, D14·4, E7, F5·7*p*, *a*4·5, *b*5·3, *c*3·9, G5·6, *a*4·7, *b*4·9, *c*4·3, H4·4, I5, J·81, K·80.

Has a triquetral ossicle in the left speno-parietal suture.

38. 421. Kanaka. ♂, æt. e. 50.

A82, B20·6, C15, *a*5, *b*5·1, *c*4·9, D15·4, E7·3, F5·7*p*, *a*4·5, *b*5·3, *c*4·2, G5·8, *a*5, *b*5·3, *c*4·5, H4·9, I5·3, J·78, K·79.

Nearly the same state of obliteration of sutures is seen as in No. 419, but probably not produced at so early an age, since the frontal depression is less. Has the *pneumatic processes* of HYRTL, which are small.

39. 423. Kanaka. ♂, æt. e. 50.

A83, B21·6, C16, *a*5·8, *b*5·4, *c*4·8, D15·6, E7·7, F5·6*p*, *a*4·8, *b*5·3, *c*4·3, G6, *a*5·1, *b*5·3, *c*4·5, H4·9, I5·3, J·72, K·77.

40. 425. Kanaka. ♀, æt. e. 50.

A67, B19·2, C13·8, *a*4·8, *b*4·9, *c*4·1, D14·7, E6·7, F5·3*p*, *a*4·3, *b*5, *c*3·7, G5·7, *a*4·7, *b*4·9, *c*3·7, H4·5, I5·2, J·79, K·85.

The coronal suture is ossified, with all the anterior part of the sagittal. There are depressions on the surface of both parietals, apparently indicative of caries.

41. 426. Kanaka. ♀, æt. c. 25.

A67·5, B19·4, C13·6, *a*4·7, *b*4·3, *c*4·6, D14·5, E6·6, F5·5*p* *a*4·4, *b*5·2, *c*4·1, G5·5, *a*4·5, *b*4·8, *c*4, H4·7, I5·2, J·83, K·83.

42. 427. Kanaka. ♂, æt. c. 70.

A76·5, B21·2, C15·3, *a*5·5, *b*5, *c*4·8, D15, E7·5, F5·6*p*, *a*4·7, *b*5·1, *c*4·3, G5·8, *a*5, *b*5, *c*4·2, H4·5, I5·3, J·74, K·77.

43. 428. Kanaka. ♀, æt. c. 25.

A70, B19·7, C14·4, *a*5·1, *b*5·1, *c*4·2, D14·5, E6·7, F5·6*p*, *a*4·5, *b*5, *c*3·9, G5·6, *a*4·8, *b*4·9, *c*3·7, H4·2, I5, J·83, K·83.

Exhibits parieto-occipital flattening.

44. 429. Kanaka. ♀, æt. c. 60.

A70, B19·9, C14·7, *a*5·1, *b*4·9, *c*4·7, D14·5, E6·9, F5·3*p*, *a*4·9, *b*4·9, *c*4·1, G5·6, *a*4·7, *b*4·9, *c*4·3, H4·3, I4·8, J·76, K·81.

45. 431. Kanaka. ♀, æt. c. 16.

B18·7, C13·5, *a*4·5, *b*4·7, *c*4·3, D14·3, E6·5, F5·2*p*, *a*4·3, *b*4·7, *c*3·9, G5·6, *a*4·5, *b*4·9, *c*4·2, H4·1, I4·8, J·80, K·86.

Has a triquetral ossicle in each spheno-parietal suture.

46. 432. Kanaka. ♀, æt. c. 60.

A63, B19·2, C13·7, *a*4·6, *b*4·4, *c*4·7, D14, E6·7, F5·1*p*, *a*4·2, *b*4·9, *c*3·8, G5·2, *a*4·5, *b*4·7, *c*4, H4·2, I4·7, J·76, K·77.

47. 434. Kanaka. ♀, æt. c. 22.

A61·5, B19·2, C13·8, *a*4·8, *b*4·8, *c*4·2, D13·4, E6·8, F5·2*p*, *a*4·2, *b*4·9, *c*3·9, G5·1, *a*4·3, *b*4·6, *c*4, H3·8, I4·9, J·76, K·75.

The teeth of this small skull are quite unworn, the wisdom-teeth of the lower jaw only just cut; but the sagittal suture is entirely ossified, with depression, but no scaphocephalism.

48. 435. Kanaka. ♀, æt. c. 35.

A75·5, B20·3, C15·4, *a*5·3, *b*4·9, *c*5·2, D14·1, E7·4, F5·1*p*, *a*4·3, *b*4·9, *c*4·1, G5·8, *a*4·7, *b*4·9, *c*4·4, H4·4, I4·9, J·69, K·78.

This skull greatly resembles No. 423.

49. 436. Kanaka. ♀, æt. c. 6.

50. 438. Kanaka. ♂, æt. c. 70.

A83, B21·1, C15·6, *a*5·4, *b*5·5, *c*4·7, D15·8, E7·4, F5·9*p*, *a*4·7, *b*5·4, *c*4·2, G5·1, *b*5·2, *c*4·2, H4·5, I5·2, J·79, K·68.

Has an irregularly quadrangular Wormian ossicle at the junction of the sagittal suture with the coronal—the “os antiepilepticum.” The two left upper incisors have been punched out.

51. 439. Kanaka. ♀, æt. c. 70.

A68·5, B19·5, C14·5, *a*5, *b*5·1, *c*4·4, D14·2, E6·8, F5·3*p*, *a*4·2, *b*4·8, *c*4, G5·5, *a*4·6, *b*4·8, *c*4, H4·4, I5, J·77, K·80.

The left upper incisor has been punched, and probably one of the lower ones.

52. 441. Kanaka. ♂, æt. c. 60.

A78·5, B20·4, C14·9, *a*5·2, *b*5, *c*4·7, D15·3, E7, F5·8*p*, *a*4·5, *b*5·4, *c*4·1, G5·8, *a*4·9, *b*5·1, *c*4, H4·4, I5·3, J·82, K·82.

This skull of a man of good age has a complete obliteration

of the sagittal suture, which has been premature and very early, and partial ossification of the outer ends of the coronal. Still it does not exhibit any *scaphocephalism* whatever, it is only slightly *klinocephalie*. On the contrary, the calvarium presents great interparietal breadth and the general trapezoidal form often seen in this race. The two middle upper incisors have been punched out.

53. 442. Kanaka. ♀, æt. c. 30.

A69, B19·7, C14·1, a4·8, b4·9, c4·2, D14·3, E6·8, F5·5p, a4·4, b5·2, c4, G5·4, a4·7, b4·8, c4, H3·9, I4·9, J·80, K·79.

54. 443. Kanaka. ♂, æt. c. 18.

A75, B20·6, C15·3, a5·2, b5·5, c4·6, D14·8, E7·3, F5·2p, a4·3, b4·8, c4·1, G5·8, a5, b5·1, c4·1, H4·6, I5·1, J·71, K·77.

55. 444. Kanaka. ♂, of great age.

A76, B20·6, C15·2, a5·5, b4·6, c5·1, D15·2, E7·2, F5·6p, a4·5, b5, c4·1, G5·8, a5, b5·1, c4·1, I5·2, J·77, K·80.

Not only are the maxillæ edentulous, but the whole of the *alveoli* are absorbed, as well as a portion of the left condyle of the lower jaw and its glenoid cavity. These are indications of old age not often seen in this race.

56. 445. Kanaka. ♀, æt. c. 8.

Has, like the last, the *processus papillares* of Prof. H. J. HALBERTSMA developed slightly.

57. 446. Kanaka. ♀, æt. c. 3.

58. 449. Kanaka. ♂, æt. c. 70. Calv.

A89·5, B21, C15·5, a5·8, b5·4, c4·3, D16·4, E7·1, F5·8p, a5, b5·4, c4·2, G6·3, a5·3, b5·5, c4·1, I5·7, J·81, K·88.

59. 452. Kanaka. ♀, æt. c. 70.

A72, B20, C14·6, a4·7, b5·1, c4·8, D14·2, E7·1, F5·1p, a4·1, b4·9, c4·1, G5·8, a4·6, b4·9, c4·3, I4·7, J·71, K·81.

60. 455. Kanaka. ♀, æt. c. 25. Calv.

A66·5, B20, C14, a4·6, b4·7, c4·7, D14·2, E6·9, F5·4p, a4·2, b4·9, c4, G5·3, a4·5, b4·7, c4, I5·4, J·78, K·76.

The sagittal suture is almost wholly obliterated, and the middle portion of the lambdoid. There are two small *processus papillares* of HALBERTSMA immediately before the anterior edge of the occipital foramen.

61. 456. Kanaka. ♂, of uncertain age. Imperf. calv.

Has a *processus papillaris* on the left side.

62. 457. Kanaka. ♀, æt. c. 10.

63. 465. Kanaka. ♂, æt. c. 30.

A63, B19·5, C14·2, *a* 4·9, *b* 4·9, *c* 4·4, D14, E 6·9, F 5·2*p*, *a* 4·1, *b* 4·7, *c* 4·1, G 5·6, *a* 4·5, *b* 4·7, *c* 4, H 4·1, I 5·1, J·75, K·81.

The coronal suture, the sagittal, and the middle portion of the lambdoid are ossified, with the effect of some degree of microcephalism only.

64. 466. Kanaka. ♀, æt. e. 4.

Has very great interparietal width, characteristic of the race.

65. 468. Kanaka. ♂, æt. e. 60.

A77·5, B20·5, C14·5, *a* 5·1, *b* 4·7, *c* 4·7, D15·5, E6·9, F5·7*p*, *a* 4·8, *b* 5·1, *c* 4·6, G 5·7, *a* 4·9, *b* 5, *c* 4·3, H 4·4, I 5·5, J·82, K·82.

The left inner incisor of the upper jaw has been knocked out in early life.

66. 469. Kanaka. ♀, æt. c. 35.

A73, B19·4, C14·1, *a* 5, *b* 5·2, *c* 3·9, D14·7, E 6·6, F 5·5*p*, *a* 4·5, *b* 5·2, *c* 3·8, G 5·7, *a* 4·9, *b* 5, *c* 3·9, H 4·4, I 5·2, J·83, K·86.

Has a triquetral bone in the right spheno-parietal suture, and the temporal portions of the coronal are ossified. The middle incisors in both jaws have been punched out early. Has a large penetrating earies in the right parietal.

67. 470. Kanaka. ♂, of great age.

A76·5, B 20·7, C14·8, *a* 5, *b* 5, *c* 4·8, D15·4, E 7, F 5·7*p*, *a* 4·7, *b* 5·3, *c* 4·4, G 5·8, *a* 4·9, *b* 5·1, *c* 4·2, I 5·5, J·81, K·82.

Another edentulous skull of a very old man, who has had some of his upper incisors punched out in early life.

68. 471. Kanaka. ♂?, æt. e. 60.

A82, B 21·2, C16, *a* 5·8, *b* 4·9, *c* 5·3, D15·9, E 7·4, F 6*p*, *a* 4·6, *b* 5·6, *c* 4·2, G 6, *a* 5·2, *b* 5·3, *c* 4·5, H 4·5, I 5·1, J·81, K·81.

Incisors have been knocked out in both maxillæ.

69. 472. Kanaka. ♂, æt. e. 70.

A72, B19·6, C14·2, *a* 5·1, *b* 5, *c* 4·1, D15·2, E 6·7, F 5·5*p*, *a* 4·6, *b* 4·9, *c* 4, G 5·9, *a* 4·9, *b* 5, *c* 3·9, I 5·3, J·82, K·88.

The incisors in both jaws have been punched out.

70. 473. Kanaka. ♀, æt. e. 40.

A65, B18·8, C13·2, *a* 4·8, *b* 4·6, *c* 3·8, D14·4, E 6·2, F 5·6*p*, *a* 4·3, *b* 5·1, *c* 4·1, G 5·4, *a* 4·5, *b* 4·8, *c* 3·6, H 4·3, I 5·1, J·90, K·87.

Has had all the lower incisors punched out. The temporal portions of the coronal, and both spheno-parietal sutures are ossified.

71. 474. Kanaka. ♂, æt. c. 70.

A75, B20·3, C14·4, *a* 4·8, *b* 5·4, *c* 4·2, D15, E 6·8, F5·8*p*, *a* 4·8, *b* 5·5, *c* 4·2, G5·5, *a* 4·6, *b* 4·8, *c* 3·9, H4·4, I5·1, J·85, K·80.

Both upper and lower incisors appear to have been knocked out in early life.

72. 475. Kanaka. ♂, æt. c. 35.

A81, B 20·5, C14·7, *a* 5·2, *b* 5, *c* 4·5, D15·9, E 7·1, F5·6*p*, *a* 4·6, *b* 5·3, *c* 4·3, G 5·8, *a* 5·1, *b* 5·2, *c* 4, H4·9, I5·6, J·78, K·81.

73. 476. Kanaka. ♂, æt. c. 40.

A81, B 20·3, C15, *a* 5·2, *b* 5·3, *c* 4·5, D15·4, E7·1, F5·5*p*, *a* 4·6, *b* 5·2, *c* 4·4, G5·8, *a* 4·9, *b* 5·1, *c* 4·1, H4·7, I5·2, J·77, K·81.

The alisphenoid does not reach the parietal on either side. All the lower incisors have been punched out.

74. 477. Kanaka. ♂, æt. c. 35.

A86, B 20·4, C15·4, *a* 5·7, *b* 5, *c* 4·7, D16, E 7·1, F 5·6*p*, *a* 4·6, *b* 5·2, *c* 3·4, G 5·9, *a* 5·2, *b* 5·4, *c* 4, H4·9, I5·3, J·78, K·81.

Is awry in the occipital region from flattening on the left side.

75. 478. Kanaka. ♂, æt. c. 50.

A82, B21, C15·7, *a* 5·5, *b* 5·5, *c* 4·7, D16, E7·3, F6*p*, *a* 4·6, *b* 5·6, *c* 4·4, G 6, *a* 5·3, *b* 5·4, *c* 4·3, H 4·7, J·82, K·82.

There is a triquetral bone in each spheno-parietal suture, and all the lower incisors have been punched out.

76. 602. Kanaka. ♂, æt. c. 40.

A79, B 21, C15·4, *a* 5·2, *b* 5·2, *c* 5, D15·5, E 7·4, F5·7*p*, *a* 4·5, *b* 5·3, *c* 4·7, G 5·8, *a* 5, *b* 5·1, *c* 4·2, H4·6, I5·2, J·77, K·78.

A very fine prognathous skull.

77. 603. Kanaka. ♂, æt. c. 50.

A85, B 21, C15·7, *a* 5·3, *b* 4·8, *c* 5·6, D15·9, E 7·4, F 5·8*p*, *a* 4·7, *b* 5·4, *c* 4·3, G 6, *a* 5·1, *b* 5·3, *c* 4·5, H4·8, I5·5, J·78, K·81.

This large skull is very much awry, especially in the occipital region, no doubt from pressure in infancy.

78. 604. Kanaka. ♀, æt. c. 19.

A73, B19·2, C14, *a* 5, *b* 5, *c* 4, D14·5, E 6·5, F 5·4*p*, *a* 4·3, *b* 5·1, *c* 4·1, G 5·6, *a* 4·7, *b* 4·9, *c* 3·7, H 4·4, I 4·8, J·83, K·86.

All the incisors of the lower jaw have been punched out.

79. 605. Kanaka. ♂, æt. c. 60.

A80, B 20·8, C15·3, *a* 5·7, *b* 5, *c* 4·6, D15·1, E 7·3, F5·5*p*, *a* 4·6, *b* 5·1, *c* 4, G 5·7, *a* 5·2, *b* 5·1, *c* 4, H 4·6, I5·4, J·77, K·77.

The sagittal, the spheno-parietal, the temporal portions of

the coronal and the internasal sutures are completely ossified, but there is no deformation. The whole of the incisors, both upper and lower, have been punched out in early life.

80. 606. Kanaka. ♀, æt. c. 25.

A71·5, B19·4, C14, *a* 5, *b* 4·8, *c* 4·2, D14·9, E6·6, F5·6*p*, *a* 4·4, *b* 5, *c* 4, G5·5, *a* 4·7, *b* 4·9, *c* 3·7, H4·6, I5·1, J·85, K·84.

Has triquetral ossicles in both spheno-parietal sutures, and is seriously affected with caries of the frontal and right malar bones, and also of the palate.

81. 608. Kanaka. ♀, æt. c. 16.

A76, B20·2, C14·6, *a* 5, *b* 5·2, *c* 4·4, D14·3, E7, F5·5*p*, *a* 4·3, *b* 5·3, *c* 4, G5·4, *a* 4·8, *b* 5, *c* 4·1, H4·4, I4·8, J·78, K·77.

82. 609. Kanaka. ♂, æt. c. 80.

A70, B19·5, C14, *a* 5·1, *b* 4·6, *c* 4·3, D15·2, E6·4, F5·7*p*, *a* 4·5, *b* 5·5, *c* 4·2, G5·6, *a* 4·8, *b* 4·9, *c* 3·9, I5·3, J·89, K·87.

This very brachycephalic skull presents a broad occiput, probably flattened in infancy, and also exhibits marks of senile atrophy, in its thinness and a depression in each of the parietals.

83. 610. Kanaka. ♂, æt. c. 80.

A68, B19·7, C14·5, *a* 5·3, *b* 4·8, *c* 4·4, D15, E6·9, F5·6*p*, *a* 4·3, *b* 5·3, *c* 4·1, G5·6, *a* 4·8, *b* 4·9, *c* 3·8, I5·2, J·81, K·81.

Very light from the atrophy of old age.

84. 611. Kanaka. ♀, æt. c. 18.

A67·5, B19·6, C14·6, *a* 5, *b* 5, *c* 4·6, D14·3, E7, F5·3*p*, *a* 4·2, *b* 5·1, *c* 4·2, G5·3, *a* 4·5, *b* 4·6, *c* 3·8, H4·3, I5, J·75, K·75.

85. 612. Kanaka. ♂, æt. c. 80.

A70, B19·5, C14·9, *a* 5·4, *b* 5·1, *c* 4·4, D15, E6·9, F5·2*p*, *a* 4·2, *b* 4·7, *c* 4, G5·6, *a* 4·8, *b* 5, *c* 3·9, I5·2, J·75, K·81.

86. 613. Kanaka. ♂, æt. c. 40.

A72, B20·1, C14·2, *a* 5, *b* 5, *c* 4·2, D15·2, E6·8, F5·8*p*, *a* 4·6, *b* 5·4, *c* 4·2, G5·5, *a* 4·7, *b* 4·8, *c* 3·9, H4·6, I5, J·85, K·80.

On the right side there is a triquetral bone in the spheno-parietal suture, on the left the suture is absent. All the lower incisors have been punched out.

87. 614. Kanaka. ♂, æt. c. 70.

A81·5, B20·5, C15·5, *a* 5·2, *b* 5·4, *c* 4·9, D15·6, E7·3, F5·4*p*, *a* 4·3, *b* 4·9, *c* 4·1, G6, *a* 5·2, *b* 5·4, *c* 4·4, H4·8, I5·2, J·74, K·71.

Presents a *processus papillaris* of Prof. HALBERTSMA on the left side, immediately before the occipital foramen. The upper

incisors on the left side, and all the lower ones, have been punched out.

88. 615. Kanaka. ♂, æt. e. 50.

A66·5, B19·8, C14·4, *a*4·8, *b*5, *c*4·6, D14·5, E6·8, F5·6*p*, *a*4·4, *b*5·3, *c*4·1, G5·5, *a*4·6, *b*4·8, *c*4, H4·2, I5, J·82, K·80.

89. 616. Kanaka. ♂, æt. e. 70.

A73·5, B19·6, C14·3, *a*4·9, *b*5·1, *c*4·3, D15·2, E6·8, F5·3*p*, *a*4·3, *b*5·1, *c*4·2, G5·7, *a*4·8, *b*5, *c*4, H4·8, I5·1, J·77, K·83.

Three of the lower incisors have been knocked out, and the calvarium is quite awry from occipital flattening on the left side.

90. 617. Kanaka. ♀, æt. e. 35.

A71, B19·7, C14·6, *a*4·8, *b*5·3, *c*4·5, D14·7, E6·9, F5·4*p*, *a*4·3, *b*5·1, *c*4, G5·7, *a*5, *b*5, *c*4, H4·2, I4·8, J·78, K·82.

On the left side both lower and the outer upper incisors have been punched out.

91. 618. Kanaka. ♂?, æt. e. 70.

A71, B19·6, C13·8, *a*4·6, *b*5, *c*4·2, D14·8, E6·4, F5·8*t*, *a*4·7, *b*5·3, *c*4·1, G5·5, *a*4·7, *b*5, *c*4, I5·3, J·90, K·85.

This singular skull of an aged Kanaka presents the form of the distorted Chenook calvarium to a great extent. The frontal is considerably depressed and the occipital flattened out, thus carrying the parietals back, so as to make a somewhat acute arch, which, with the temporals, bulges out at the sides. This assuredly is the effect of art, although marks of art are not distinguishable (see No. 650). The right limb of the lambdoid suture is partly ossified and obliterated. The alisphenoids are entirely cut off from the parietals.

92. 619. Kanaka. ♂, æt. e. 60.

A85, B20·5, C15·8, *a*5·5, *b*5·4, *c*4·9, D15·8, E7·1, F5·8*p*, *a*4·6, *b*5·3, *c*4·1, G6, *a*5, *b*5·2, *c*4·2, H4·9, I5·2, J·81, K·84.

This skull presents a remarkable example of partial synostosis and consequent deformation. On the left side the squamous and speno-parietal sutures have been prematurely ossified and are entirely obliterated. All the others are still open. The result has been an arrest of development in the left temporal region, where there is a distinct depression, like a groove, running upwards from the alisphenoid towards the sagittal suture; whilst the right side of the calvarium is equally bulged out and full. There is a large paroccipital, or paramastoid, process on the left side, a smaller on the right. The left condyle of the lower jaw is affected with the exostoses to which this race is particularly liable. Three of the upper incisors have been punched out.

93. 620. Kanaka. ♂, æt. c. 50.

A82, B21·3, C15·8, a5·3, b5·1, c5·4, D15·9, E7·5, F5·6p, a4·7, b5·3, c4·4, G5·9, a5·1, b5·3, c4·5, H4·8, I5·5, J·74, K·78.

Has the *processus papillares* of Prof. HALBERTSMA, making his Form D of the *condylus tertius* of J. F. MECKEL. A heavy hyperostotic skull, in which all the upper front teeth have been punched out.

94. 621. Kanaka. ♀, æt. c. 25.

A72·5, B19·3, C13·7, a4·6, b4·6, c4·5, D14·4, E6·6, F5·5p, a4·4, b5, c4·2, G5·7, a4·5, b4·9, c4·1, H4·5, I5·2, J·83, K·86.

95. 622. Kanaka. ♀, æt. c. 30.

A69, B19·6, C13·8, a4·8, b4·8, c4·2, D14·7, E6·6, F5·4p, a4·4, b5·2, c4·3, G5·5, a4·7, b4·9, c3·8, H4·6, I5·1, J·81, K·83.

This skull has been exposed to parieto-occipital flattening, which has operated chiefly on the left side. It also exhibits asymmetrical plastic deformation, which has elevated the left condyloid process and the occipital on this side. The *foramen magnum* is deformed on the same side. The upper outer incisor of the left side has been punched out.

96. 623. Kanaka. ♂, æt. c. 25.

A78, B20·5, C14·6, a4·8, b5·2, c4·6, D14·8, E7, F5·6t, a4·3, b5·1, c4·3, G5·7, a4·8, b4·9, c4, H4·4, I5·3, J·80, K·81.

This skull has a leaden bullet, .6 of an inch in diameter, firmly imbedded in the left side of the occipital, just below the superior semicircular ridge. It has caused a considerable depression of the inner table. This ball had been fired, from a gun, at his neck, when the man was retreating from an enemy, some years before his death.

97. 624. Kanaka. ♂, æt. c. 70.

A77, B20·1, C14·9, a5·2, b5, c4·7, D15·4, E7, F5·7p, a4·5, b5·2, c4, G5·7, a4·8, b5·1, c4·1, I5·4, J·81, K·81.

The incisors have been punched out, and there is a nodular exostosis in the left auditory canal.

98. 625. Kanaka. ♂, æt. c. 50.

A66, B20, C14·1, a5, b4·8, c4·3, D14·5, E6·8, F5·4p, a4·3, b5, c4·2, G5·5, a4·6, b4·7, c4, H4·3, I5·2, J·79, K·80.

Is a little oblique in the occipital region. All the incisors of the lower maxilla have been punched out. Has nodular exostoses in the external auditory canals.

99. 626. Kanaka. ♀, æt. c. 70.

A72·5, B20·1, C14·2, a5·3, b4·9, c4, D15, E6·8, F5·7p, a4·6, b5·2, c4·2, G5·6, a4·8, b4·9, c4, I5·3, J·83, K·82.

100. 627. Kanaka. ♀, æt. c. 70.

A70·5, B19·7, C14·3, a5·1, b5, c4·2, D14·3, E6·8, F5·3p, a4·4, b4·9, c4·1, G5·7, a4·6, b4·9, c4, I5·1, J·78, K·82.

101. 628. Kanaka. ♀, æt. c. 50.

B19·9, C14·5, a5·1, b5, c4·4, D15, E7, F5·6p, a4·4, b5·1, c4, G5·6, a4·9, b5, c3·9, H4·4, I5·1, J·80, K·80.

This skull presents a remarkable deformation from synostosis. The sagittal suture and the temporal portions of the coronal are totally obliterated from premature ossification. In the first the synostosis has not conformed to the rule and produced the *carina* of scaphocephalism, but, on the contrary, a deep depression in the line of the closed suture, proving that VIRCHOW and LUCAS'S positions must not be received too absolutely¹. The second synostoses have been followed by their usual consequences, a depression or slight groove running in the line of the coronal in the temporal regions, partial klinocephalism. All the lower incisors and the outer one on the right side in the upper jaw have been punched out.

102. 629. Kanaka. ♀, æt. c. 30.

A66, B19·2, C13·8, a5, b4·7, c4·1, D14·6, E6·5, F5·5p, a4·5, b5, c3·7, G5·5, a4·7, b4·8, c3·7, H4·5, I5·1, J·84, K·84.

All the lower incisors have been punched out.

103. 630. Kanaka. ♂, æt. c. 60.

A74·5, B20·2, C15·4, a5·3, b5, c5·1, D15·3, E6·9, F5·8p, a4·6, b5·4, c4·2, G5·9, a5, b5·2, c4·4, H4·7, I5·5, J·84, K·85.

104. 631. Kanaka. ♀, æt. c. 30.

A70·5, B20, C14·2, a5, b4·3, c4·9, D14·6, E6·8, F5·6p, a4·7, b5·3, c4·2, G5·4, a4·6, b4·8, c4·3, H4·6, I5, J·82, K·79.

Has a Wormian bone in the left speno-parietal suture.

105. 632. Kanaka. ♀, æt. c. 50.

A73, B19·4, C13·8, a4·9, b5, c3·9, D14·8, E6·6, F5·4p, a4·5, b5, c4, G5·5, a4·8, b4·9, c3·7, H4·4, I5·3, J·81, K·83.

106. 633. Kanaka. ♀, æt. c. 4.

107. 634. Kanaka. ♂, æt. c. 70.

A78, B20·3, C14·3, a5, b5, c4·3, D15, E7·1, F5·4p, a4·3, b5·1, c4·1, G5·4, a4·8, b4·9, c4·2, H5, I5·7, J·76, K·76.

This skull of an old man is, like No. 628, synostotic, and may also be quoted as exceptional to the views of VIRCHOW and LUCAS. The sagittal suture and the temporal portions of the coronal

¹ J. Barnard DAVIS, *On Synostotic Crania among Aboriginal Races*, p. 28.

had long been completely ossified. All the central divisions of the lambdoid and coronal are almost obliterated. The other sutures usually open are tolerably so. The resultant deformation is not *scaphocephalism* at all, but decided *kliinocephalism*. There is a distinctly depressed groove passing from one alisphenoid to the other, across the fore part of the parietals, thus causing the calvarium to resemble the *tête annulaire* of FOVILLE. The parietal region is tolerably wide and quite equable on its surface, neither elevated nor depressed. The calvarium has not been shortened. The right auditory canal is almost closed up with nodular exostoses. All the upper incisors have been punched out early in life, and some of the lower also.

108. 635. Kanaka. ♂, æt. e. 65.

A71·5, B19·8, C14·4, a5·1, b4·4, c4·9, D14·8, E6·8, F5·4p, a4·1, b5·1, c4·1, G5·5, a4·7, b4·9, c4·1, H4·5, I5·3, J·79, K·80.

Three of the upper incisors have been punched out.

109. 636. Kanaka. ♂, æt. e. 30.

A80·5, B20·5, C14·9, a5·5, b4·7, c4·7, D15·4, E7·2, F5·6p, a4·6, b5, c4·1, G5·6, a4·9, b5, c4·1, H4·9, I5·5, J·78, K·78.

110. 637. Kanaka. ♂, æt. e. 30.

A74, B20·4, C14·9, a5·2, b5·2, c4·5, D14·6, E7·3, F5·4p, a4·2, b4·8, c4, G5·5, a4·6, b4·7, c4, H4·4, I5·6, J·74, K·75.

111. 638. Kanaka. ♀, of middle age.

A71·5, B19·2, C14·6, a5, b5·2, c4·4, D14·9, E6·5, F5·5p, a4·4, b5, c4·1, G5·9, a4·9, b5·1, c3·8, H4·6, I5·2, J·84, K·90.

This is one of VIRCHOW's *pachycephalic* crania from synostosis. The coronal and lambdoid sutures, with the fore part of the sagittal, have been prematurely ossified. The results have been shortening of the calvarium and elevation in the position of the ossified sagittal. The skull presents *pachycephalism* and limited *scaphocephalism*, but is not of the same form as that of "PORI" the Ohivaoan (No. 1140). The cheek-depressions are remarkably deep. The lower incisors have been punched out.

112. 639. Kanaka. ♀, æt. e. 70.

A72, B19·8, C14·4, a4·8, b5, c4·6, D14·8, E6·8, F5·5p, a4·6, b5, c4, G5·7, a4·8, b5, c3·8, H4·4, I5·1, J·80, K·83.

The lower incisors have been knocked out, and some of the upper also.

113. 640. Kanaka. ♀, æt. e. 45.

A72·5, B19·5, C14·2, a5, b5, c4·2, D14·4, E6·6, F5·7p, a4·6, b5·3, c4, G5·7, a4·6, b4·9, c4, H4·4, I4·8, J·86, K·86.

114. 641. Kanaka. ♀, æt. e. 17.

A65, B18·6, C13·3, *a*4·5, *b*4·6, *c*4·2, D14·2, E6·4, F5·4*p*, *a*4·4, *b*5·2, *c*3·9, G5·4, *a*4·3, *b*4·7, *c*4, H4·2, I4·8, J·84, K·84.

The calvarium is much awry in the occipital region from parieto-occipital flattening towards the left side.

115. 642. Kanaka. ♀, æt. e. 65.

A65, B19·1, C13·6, *a*4·7, *b*4·3, *c*4·6, D14·1, E6·6, F5·3*p*, *a*4·4, *b*5, *c*3·9, G5·4, *a*4·6, *b*5, *c*4, I5·1, J·80, K·81.

Some incisors have been punched out in both jaws. There is obliquity on the left side of the occipital region from the same cause as in No. 641.

116. 643. Kanaka. ♂, æt. e. 60.

A82, B21, C15, *a*5·1, *b*5·2, *c*4·7, D15·7, E7·3, F5·8*p*, *a*4·8, *b*5·6, *c*4·3, G5·7, *a*5, *b*5, *c*3·9, H4·4, I5·6, J·79, K·78.

Presents marks of parieto-occipital flattening on the right side of the occipital, and the upper inner incisor on the left side has been punched out.

117. 644. Kanaka. ♀, æt. e. 50.

A64, B19·2, C14, *a*4·9, *b*4·9, *c*4·2, D14·5, E6·7, F5·3*p*, *a*4·2, *b*4·9, *c*3·7, G5·4, *a*4·7, *b*4·8, *c*3·7, H4·4, I4·9, J·79, K·80.

Both alisphenoids are cut off from the parietals by the squamous plates of the temporals. The skull is somewhat affected with *hyperostosis*. The upper incisors of the left side, and some of the lower, have been punched out.

118. 645. Kanaka. ♂, æt. e. 40.

A61, B18, C13·5, *c*4·3, D14·5, E6·3, F5*p*, *a*4·3, *b*4·6, *c*3·9, G5·2, *a*4·7, *b*4·8, *c*3·9, H4·4, I5, J·79, K·82.

The sagittal and coronal sutures are entirely obliterated, the central portion of the lambdoid is nearly ossified, the other sutures are free. The resulting deformation is a short, rather square and elevated calvarium. J. Barnard DAVIS, *On Synostotic Crania among Aboriginal Races*, 1865, 4to, plate viii.

119. 646. Kanaka. ♀, æt. e. 70.

A71·5, B20, C14·8, *a*5·1, *b*5, *c*4·7, D14·3, E7, F5·5*p*, *a*4·3, *b*5·3, *c*4·1, G5·5, *a*4·8, *b*4·9, *c*4·2, I5, J·78, K·78.

The lower incisors have been knocked out.

120. 647. Kanaka. ♂, æt. e. 35.

A76, B19·8, C14·8, *a*4·9, *b*5·3, *c*4·6, D14·8, E6·8, F5·5*p*, *a*4·5, *b*5·1, *c*4·2, G5·6, *a*4·8, *b*4·9, *c*3·9, H4·4, I5·1, J·80, K·82.

Has a frontal suture. The lower incisors have been punched out.

121. 648. Kanaka. ♂, æt. e. 70.

A77, B20·5, C15·6, *a* 5·2, *b* 4·8, *c* 5·6, D15·6, E 7, F 5·7*t*, *a* 4·4, *b* 5, *c* 4·4, G 5·9, *a* 5, *b* 5·1, *c* 4·4, H 4·6, I 5·5, J·81, K·84.

Has a large epactal, embracing the whole scaly portion of the occipital. Has had the inner incisor of the upper jaw, on the right side, punched out.

122. 649. Kanaka. ♀, æt. e. 14.

The sagittal suture is entirely obliterated; the others are open. The calvarium has been subjected to parieto-occipital flattening, and there is a depression running across from one alisphenoid to the other (klinocephalism), but no other deformation.

123. 650. Kanaka. ♀, æt. e. 40.

A68·5, B19·5, C14, *a* 5, *b* 4·9, *c* 4·1, D14·9, E 6·6, F 5·9*p*, *a* 4·6, *b* 5·6, *c* 4·1, G 5·5, *a* 4·7, *b* 4·9, *c* 3·7, H 4·4, I 5, J·89, K·83.

Another skull approaching closely, like No. 618, to the Chcnook form. It must have been compressed in infancy. The temporal portions of the coronal suture are both obliterated, as well as the spheno-frontal and -parietal sutures. These synostoses have contributed materially to depress the frontal. Both an upper and a lower incisor has been knocked out on the left side.

124. 651. Kanaka. ♀, æt. e. 60.

B19·8, C14·6, *a* 5, *b* 5·1, *c* 4·5, D14·7, E 6·9, F 5·5*p*, *a* 4·4, *b* 5·2, *c* 3·9, G 5·7, *a* 4·7, *b* 4·9, *c* 3·8, H 4·4, I 4·9, J·79, K·82.

All the lower incisors have been knocked out.

125. 652. Kanaka. ♀, æt. e. 60.

A74, B19·7, C14·7, *a* 5·1, *b* 5·1, *c* 4·5, D14·7, E 6·9, F 5·5*p*, *a* 4·3, *b* 5·3, *c* 3·9, G 5·8, *a* 4·7, *b* 4·8, *c* 3·7, H 4·4, I 4·9, J·79, K·84.

The lower incisors have been knocked out.

126. 653. Kanaka. ♂, æt. e. 60.

A72·5, B19·6, C14, *a* 5·1, *b* 4·9, *c* 4, D14·8, E 6·6, F 5·7*p*, *a* 4·6, *b* 5·1, *c* 4·3, G 5·6, *a* 4·7, *b* 4·8, *c* 3·7, H 4·9, I 5·2, J·86, K·84.

There are nodular exostoses in the right auditory canal.

127. 654. Kanaka. ♂, æt. e. 50.

A83, B21·1, C15·3, *a* 5·2, *b* 5·2, *c* 4·9, D15·9, E 7·2, F 5·8*p*, *a* 4·7, *b* 5·5, *c* 4·4, G 6·1, *a* 5, *b* 5·4, *c* 4·4, H 4·9, I 5·1, J·80, K·84.

In this ponderous skull all the incisors, both above and below, have been punched out.

128. 655. Kanaka. ♂, æt. e. 40.

A74, B 20, C14·1, *a* 5·1, *b* 4·7, *c* 4·3, D15, E 6·8, F 5·7*p*, *a* 4·8, *b* 5·3, *c* 4, G 5·5, *a* 4·8, *b* 4·8, *c* 3·9, H 4·7, I 5·1, J·83, K·80.

Sutures much ossified. One of the lower incisors has been punched out.

129. 656. Kanaka. ♂, æt. e. 50.

A75, B19·6, C14·7, *a* 5·3, *b* 5, *c* 4·4, D15·2, E 6·6, F5·5*p*, *a* 4·2, *b* 5·2, *c* 4·3, G5·6, *a* 4·9, *b* 4·9, *c* 3·7, H4·3, I5·2, J·83, K·84.

Occipital region awry from parieto-occipital flattening on the right side. All the incisors of the lower jaw have been knocked out.

130. 657. Kanaka. ♂, æt. c. 60.

A80·5, B19·5, C14, *a* 5·1, *b* 4·7, *c* 4·2, D14·9, E6·5, F5·7*p*, *a* 4·6, *b* 5·2, *c* 4·2, G5·7, *a* 4·7, *b* 4·8, *c* 3·7, H4·4, I5·2, J·87, K·87.

131. (657.) Kanaka. ♂, æt. c. 40.

A82·5, B20·1, C14·5, *a* 4·9, *b* 5·1, *c* 4·5, D15·5, E6·8, F5·5*p*, *a* 4·6, *b* 5·2, *c* 4·2, G 6, *a* 4·7, *b* 5, *c* 3·9, H 4·9, I5·7, J·80, K·88.

Has a small paroccipital process on the right side.

132. 658. Kanaka. ♂, æt. e. 65.

A72·5, B20, C14·4, *a* 5·2, *b* 4·1, *c* 5·1, D14·8, E7·1, F5·4*p*, *a* 4·3, *b* 5·1, *c* 4·2, G5·7, *a* 4·8, *b* 4·9, *c* 4·2, H4·7, I5·5, J·76, K·80.

The occipital tuber is prolonged into a pointed process, more than half an inch in length. The right inner incisor has been knocked out in the upper jaw, and the two middle ones in the lower.

133. 659. Kanaka. ♂, æt. c. 65.

A74, B 20·3, C14·9, *a* 5·1, *b* 5·1, *c* 4·7, D15·2, E7, F5·6*p*, *a* 4·5, *b* 5·2, *c* 4·1, G5·9, *a* 4·8, *b* 5, *c* 4·2, H4·8, I5·4, J·80, K·84.

This skull, like many others of the series, approaches the Neanderthal in form. It has exceedingly thick crest-like supra-ciliary ridges, the mass of bony matter projecting about an inch beyond the cranial cavity. The frontal is very much depressed, the result of the perfect ossification of an inch of each extremity of the coronal suture. All the upper incisors have been knocked out.

134. 660. Kanaka. ♀, æt. c. 12.

135. 661. Kanaka. ♂, æt. c. 60.

A76, B 20, C14·5, *a* 5·3, *b* 4·9, *c* 4·3, D15, E 6·9, F5·5*p*, *a* 4·5, *b* 5·1, *c* 4·2, G5·6, *a* 4·9, *b* 4·9, *c* 4, H 3·8, I5·3, J·79, K·81.

The two upper incisors on the right side, and all the lower ones, have been punched out.

136. 662. Kanaka. ♀, æt. c. 70.

A65, B19·2, C13·8, *a* 4·9, *b* 4·8, *c* 4·1, D14·1, E 6·5, F5·4*p*, *a* 4·4, *b* 5·2, *c* 3·8, G5·5, *a* 4·7, *b* 4·8, *c* 3·5, I4·9, J·83, K·84.

137. 663. Kanaka. ♂, æt. c. 50.

A73, B19·4, C13·7, *a* 5, *b* 5, *c* 3·7, D15, E6·4, F5·6*p*, *a* 4·5, *b* 5·3, *c* 4·2, G5·6, *a* 4·7, *b* 4·9, *c* 3·9, H 4·6, I5·3, J·87, K·87.

138. 664. Kanaka. ♀, æt. c. 50.

A81, B20, C14·5, a4·9, b5·3, c4·3, D15·5, E6·6, F6p, a4·9, b5·3, c4, G5·7, a4·9, b5·1, c4, H4·7, I5·2, J·90, K·86.

A portion of the extreme interparietal breadth is to be attributed to parieto-occipital flattening. The two middle incisors of the upper maxilla have been knocked out.

139. 665. Kanaka. ♂, æt. c. 60.

A86·5, B20·6, C14·9, a4·9, b5·1, c4·9, D15·4, E7·1, F5·6p, a4·6, b5·2, c4·4, G5·9, a4·9, b5·2, c4·4, H4·5, I5·2, J·78, K·83.

The outer incisor on the right side has been punched out in the upper maxilla, and the two middle ones in the lower.

This numerous and unrivalled series of Kanaka erania, from the island of Oahu, was presented, at different times, by W. L. GREEN, Esq., of Honolulu.

It is a noteworthy fact that the person who was the means, directly or indirectly, of bringing together the greatest number of specimens towards the formation of this Collection, is one well known to fame, the late General William MILLER. In one degree or another, the erania from the Sandwich, Marquesan, and other islands of the Pacific may be ascribed to his kind efforts to aid my project. The chivalrous and romantic history of his early life is recorded in his brother's *Memoirs of General Miller in the service of the Republic of Peru*, 2 vols. 8vo, 2nd ed., 1829. MILLER was a Kentish man, and, after a most eventful career, died on board H.M.S. 'Naiad,' in Callao Bay, Oct. 31, 1861. His body was subjected to embalmment, when 22 wounds were counted upon it and 2 bullets were extracted from it. His remains "were interred with all the honours which the Peruvian Government could bestow." Mr. MARKHAM, who received much generous sympathy and assistance from Gen. MILLER in the noble and daring undertaking to transplant the life-preserving *Cinchonidæ* from Peru to the English possessions in India, after speaking of MILLER's bravery and prowess, and of his administrative ability, adds, "his pure standard of honour, his scrupulous integrity, his warmth of heart, and single-mindedness are known to a wide circle of sorrowing friends" (*Travels in Peru and India, while superintending the collection of Chinchona Plants and Seeds in South America, and their introduction into India*. By Clements R. MARKHAM, 1862, p. 523). The cordial and efficient aid he afforded to the formation of this Cranial Collection deserves to be recorded in terms of warmth and gratitude.

140. 945. Kanaka. ♂, æt. c. 45. Calv.

D.C.

A80·5, B20·5, C15·5, a5·9, b5·3, c4·3, D16·1, E7, F5·4p, a4·8, b5·5, c4·2, G5·8, a5·4, b5·4, c3·9, I5·1, J·77, K·82.

Presents indications of considerable parieto-occipital flattening

on the right side of the occiput. The left outer incisor has been punched out in early life.

Labelled (in, I believe, the handwriting of Joshua BROOKES, F.R.S.) "Presented by A. COLLIE, Surg. R.N."

Average measurements of the skulls of 64 Kanaka men. A77·5, B20·4, C14·9, *a*5·2, *b*5, *c*4·6, D15·3, E7, F5·6, *a*4·5, *b*5·2, *c*4·2, G5·7, *a*4·9, *b*5, *c*4·1, H4, I5·3, J·79, K·81.

Extremes, A63–89·5, J·71–89, K·68–88.

Average measurements of the skulls of 52 Kanaka women. A70·3, B19·6, C14·2, *a*4·9, *b*4·8, *c*4·4, D14·4, E6·7, F5·4, *a*4·4, *b*5·1, *c*4, G5·5, *a*4·6, *b*4·8, *c*3·9, H4·3, I5, J·80, K·81.

Extremes, A61·5–85, J·69–90, K·72–87.

Greatest breadth, F, both in men and women, almost invariably parietal.

Average measurements of 116 skulls of Kanaka men and women.

A73, B20, C14·5, *a*5, *b*4·9, *c*4·5, D14·8, E6·8, F5·5, *a*4·4, *b*5·1, *c*4·1, G5·6, *a*4·7, *b*4·9, *c*4, H4·1, I5·1, J·80, K·81.

References.—RETZIUS, *Ueber Schädel von Sandwich-Insulaner*, Ethnol. Schriften, fol., 1864, S. 65, pl. iv. fig. vi. RETZIUS states that he was at first in doubt as to the right place of the skulls of Kanakas in his system, but became convinced that they constitute one of the most extreme divisions of the brachycephalic prognathous class, and form a transition from this to the dolichocephalic. The averages now given prove their brachycephalism. DUMOUTIER, *Voy. au Pôle Sud, Anthropol.*, Atlas, pl. 32. figs. 1, 2. C. W. F. UHDE, *Ueber die Schädelform der Sandwich-Insulaner*, 4to, 1861, mit zwei Tafeln.

APPENDIX.

A. *On the Measurements of the Skulls, with Tables.*

THE largest number of crania of the different races of man ever before submitted to measurement was that of the great collection made by the late Dr. S. G. MORTON, who devoted very considerable labour to this object. At the time that he presented his *metrological* Report on these skulls to the Academy of Sciences of Philadelphia (in 1849), this collection embraced 623 specimens. His measurements were confined to two dimensions only, the Faial Angle and the Internal Capacity. He made no attempt to distinguish the skulls of women from those of men, but embraced both conjointly in his averages, provided the specimens were those of persons of 16 years of age or upwards, the period at which he considered the brain had acquired its "adult size." In the Report alluded to, he presented a Table of the "Size of the Brain" in these 623 crania, arranged in Races and Families, in which he took the gross Internal Capacities of the skulls to represent the magnitudes of the brains they had contained. He stated first the number of skulls of each Family or Race, the Capacity of the largest of the series and of the smallest, and then the Mean Capacity of each series.

When Dr. J. Aitken MEIGS, in 1855, devoted his laborious attention to the completion of the Catalogue of the great Mortonian Collection, by preparing a new edition of the work, the museum contained 1035 specimens. Dr. MEIGS completed the Catalogue in "a uniform manner" with that of MORTON, and measured the skulls in accordance with his methods; *i. e.* he continued to restrict himself to the Faial Angle and Internal Capacity, the measurements of which he extended to the entire series. He also gave two Tables of Averages of Cranial Capacities—first, of European Crania, in which he separated the male from the female skulls, and, secondly, of American Crania, separated into the "Barbarous Tribes" and the "Toltecian Races."

In the present Catalogue, which extends to a much larger number of specimens than that of the Mortonian Collection, I have endeavoured to distinguish the skulls of women, and, in the summaries of measurements at the end of each section, have presented their averages separately. I have also extended the measurements considerably, so as to embrace no less than 18 different dimensions, instead of the 2 of MORTON—one of his,

the Facial Angle of CAMPER, which was formerly considered to be the index of the mental power of a race or of an individual, being wholly omitted. I have also introduced two Ratios, which are of great use in determining the chief forms of skulls.

I propose in this place to present a few Tables of the principal results of this vast series of metrological observations, so as to make them more accessible to the reader,—and, secondly, to institute a comparison of these results with those of MORTON, as far as a comparison can be made. When this has been effected, it should be borne in mind that the use of the great mass of metrological data contained in this work is by no means limited to such a comparison, but may be employed in the same way by setting it by the side of any other series of measurements, and that, in truth, it is applicable to many other purposes.

If we first attempt to analyze and to compare, as far as we can, the results of this extended series of observations with those obtained by Dr. MORTON, we shall see that the largest average *Internal Capacity* obtained among the skulls of *European Races*, which reach 90 cubic inches or more, is attained by the following peoples, in the order in which they are here placed:—Germans 98·5, Russians 98·5, Cossacks 98·5, Finns 98, Ancient Britons 97·5, Welsh 94·8, Turks 93·3, Merovingian Franks 93, Italians 93, Dutch 92·5, Swedes 92, Scotch 91·2, Irish 91·2, English 90·9, Lapps 90·6, Ancient Gauls 90·3 cubic inches. In MORTON's Table the largest averages among European peoples range in the following order:—English 96 cubic inches, Germans and Prussians each 95, True Finns 94·3, Swedes 93, whilst the Native Irish fall short of 90, the mean being only 87 cubic inches.

The value of such averages must not be insisted on too absolutely. It is liable to many fluctuations. Hence MORTON's Table, like these, can only be looked upon as a *contribution* to the estimation of the internal capacities of the crania of different races. It is plain that the averages obtained from the gauging of any number of skulls of any particular race of people will be materially influenced by the extent of that number, by the proportion of female to male examples, by the fineness or poorness of the specimens themselves, or by the ratio of megaloecephalic and microcephalic crania in the collection, and, if the opinions of some observers are to be confided in, by the class of the population to which the skulls have belonged. These positions explain the fact that, whilst in MORTON's Table the average internal capacity of the 5 English skulls exceeds that of all others, and is 96 cubic inches¹, in our Table it is only 90·9, and is exceeded by the averages of 13 other races, ranging from 98·5

¹ The late Dr. Geo. WILLIAMSON, as the result of his measurements, gave the greatest internal capacity of the English skull as 97·1 cubic inches. Probably this was only one specimen. (*Observations*, p. 76.)

inches downwards. In forming the present Collection no efforts were made to procure English skulls, but such efforts have been reserved to obtain exotic crania, and the English specimens are mostly those derived from the DEVILLE Collection, which was formed for phrenological purposes, and contained many small and poor English examples, as well as a few large fine ones.

If we turn next to *Asiatic Races*, and select those, much fewer in number, having an average internal capacity above 90 cubic inches, they range as follows:—Mishmees 92·7, Chinese 92·6, Thais or Siamese 92·1, Bodos 90·6. MORTON has only three families comparable with these; but none of them reach to 90 cubic inches. They are his “Aryas” 86, his Bengalees 78, and his Chinese 85.

Of *African Races* there are only three that reach to 90 cubic inches in average. The Kafirs are 92·6, the Zulus 91·2, and the Dahomans 90·7. The mean of MORTON’s Negro group is 82·25.

Of the comparatively few skulls of *American Races* in this Collection, those of the Araucanians attain to an average of 94·1 c. i., and the Esquimaux 90·6. The average of the entire American group is 89 c. i., whilst in MORTON’s Table it descends to 80·3, although there appear to be two or three megaloccephalic examples in the Collection.

The average internal capacities of our two *Australian Races* are, Australians 80·9, Tasmanians 82·5, the general average being 81·7 cubic inches. The 8 Australian skulls of MORTON’s Table afford an average of 75 c. i. only.

Among our *Oceanic Races* there are no less than 9 families whose average internal capacities exceed 90 cubic inches; but there are not any of MORTON’s divisions with which they can be compared. These larger averages arrange themselves as follows:—Madurans 98·6 c. i., Tidorese 98·4, Javans 93·3, Papuans 91·6, Loyalty Islanders 91·3, Marquesans 91, Sumatrans 90·8, Amboynese 90·5, Celebeans 90·2.

If we turn to the consideration of the *largest* and the *smallest* skulls in the series of our Tables, the former will appear to be as follows—mentioning those only with an internal capacity above 100 cubic inches, not 90 as before; for there are but few families in the entire collection the largest crania in which do not reach 90 c. i. of capacity: these few are:—the Eboes 85·1, the Hottentots 83·9, and the Bushmans 85·7 among *African Races*; the Caribs 86·3 among *American Races*; and the Nians 83·5, the Negritos 84·5, and the Salomon Islanders among *Oceanic Races*. The largest skulls arrange themselves among *European Races* in the different families thus—an Irish cranium 121·6 c. i., an Italian 114·3, an English 112·4, a Russian 111·8, a Finn 110·6, an ancient British and a German also 109·4, a Dutch 107, an ancient Roman 106·4, a Lapp 105·8, a Cossack 105·2, an ancient Gaul 103·7, a Romano-British 103·3, a French 102·1, a Mero-

vingian Frank 101·5, an Anglo-Saxon and a Welsh 100·9; *Asiatic Races*—a Chinese 111·8, a Bodo 105·8, an Indian Mus-sulman 103·3, a Bhotia 102·7, a Hindoo 100·9; *African Races*—a Negro 105·8, a Kafir 104·5, a Bakêlê 103·3; *American Races*—an Esquimaux 113·1 and an Araucanian 115·5; *Australian Races*—an Australian 104·5; *Oceanic Races*—a Maduran and a Marquesan each 110·6, a Kanaka 108·8, a Javan 107, an Am-boynese 104·5, a Tidorese 103·3, a Celebean and a Sumatran 100·9.

Prof. WELCKER has proposed to regard skulls which are capable of containing brains weighing from 1490–1500 grammes (52·6–52·9 oz. av.) as abnormally large¹. His method of determining the internal capacity of a skull, by means of husked wheat-corns, is different from that employed here. He also makes an allowance for the difference between the cubic capacity of the skull and the volume of the brain, which varies from 11·6 to 14 *per centum* of the former, according to the size of the skull itself, and increasing as this increases². This is a rather larger allowance than the deduction of 4 or 5 ounces from the cerebral matter (to which we have been accustomed) for the weight of membranes and fluids in all adult skulls. The latter allowance (in a skull having an internal capacity equal to 90 ounces of sand, or 65·6 ounces of cerebral matter) amounts to less than 10 *p. c.* Without being able (from personal observation) to fix any rule for expressing the relation of the volume of the brain to the internal capacity of the skull, it seems probable that we should not err materially if we proposed an allowance of at least 10 *per cent.* for losses, and deduct this from the internal capacity *in all cases*, to obtain the weight or volume of the brain.

The volume of the brain in its relation to the cavity which contains it undergoes considerable changes at the different periods of life. In the earlier years, it presses on all sides upon the interior of the skull, which yields in all directions, although not mechanically, when the sutures are in a normally open state. As life advances this expansive force of the brain diminishes, the resistance of the bones increases; and when the middle period arrives, it is probable that in most persons the organ normally begins a course of shrinking, which gradually increases to old age. In some cases this shrinking deserves the name of atrophy. Although the brain shrinks, the cranial cavity remains perfectly filled by means of the serous fluids which are effused in the ventricles and between the membranes. Occasionally the atrophy invades the bony walls of the cranial cavity also, and they follow the shrunken brain, exhibiting depressions in their outer surfaces. Up to the present time there have not been made any observations sufficiently careful and extended to enable us

¹ *Wachsthum und Bau*, S. 140.

² *Id.* S. 38.

to determine with any degree of satisfaction the rate at which the brain shrinks and the serous fluids are secreted; in truth, these changes vary in almost every individual case, the serous fluids in general gradually increasing after the middle period of life. Still, by adopting the proposed deduction of 10 *p. c.* in all cases, we may probably approach pretty nearly to the average loss of weight or volume by the abstraction of the membranes and fluids of the brain. Hence the brains proposed by Prof. WELCKER as marking the commencement of abnormal heaviness, weighing from 1490–1500 grammes, with the addition of 10 *p. c.* for losses, *i. e.* 1639–1650 grammes, may be considered to require skulls having internal capacities ranging from 96·4–97 cubic inches, or holding an equivalent of Calais sand of from 79·3–79·7 ounces av. From this it will be rendered apparent that there is a good number of skulls in the Collection, belonging to many races, deserving to be regarded as megaloecephalie (*-kephalones* of VIRCHOW). Among the series of *European* crania there are only two families the largest skulls in which do not reach this megaloecephalie capacity. These are the ancient Scottish 94·2 c. i., and the Scottish 95·4 c. i. We attach no great weight to the fact that these both occur among the Scotch, who are commonly regarded as having large heads; for our low averages may arise from the circumstance of our few Scottish skulls being of sizes below the average. Among our *Asiatic Races* the Khas is the only family which does not contain one skull reaching to the standard of megaloecephaly. Nearly one-half the *African* families (6 out of 13) offer the same defective development, and afford no instance of megaloecephaly. The Caribs, among *American Races*, are in a like condition; the Tasmanians among *Australian Races*; and 6 out of 20 families included in our *Oceanic Races*. The Marquesan Islanders, of whom there are 29 skulls in the Collection, are remarkable for presenting an *average* internal capacity coming high within the range of megaloecephaly, as determined by this rule, namely 100 c. i. The ancient Britons, the Germans, Finns, Russians, Cossacks, and Madurans are the only other races in which the *average* internal capacity rises to within the limits of this definition of megaloecephaly.

As a general deduction, it may be said that the several great divisions of mankind stand in the following order in reference to the size of their skulls and brains, beginning from the lowest and ascending upwards:—*Australian Races*, general average 81·7 cubic inches. *African Races*, 86·2 c. i. *American Races*, general average 89, which is evidently too high, as is proved by MORTON'S Table. *Asiatic Races*, 88·7. *Oceanic Races*, 89·7. *European Races*, 92·1 c. i. This order of the geographical divisions of mankind is most likely correct, except in the case of the American races, which may probably come before the African

racess in this ascending series. The general average obtained by MORTON from his vast collection of 341 American skulls was as low as 80·3 e. i., which is, in truth, below our Australian general average. It has hitherto been usually admitted that Europeans had the largest brains among the great divisions of men, and that Australians had the smallest: but it was not previously known that the people of Oceania stood next to the first; yet there seems every probability of this being really the case¹.

In order to obtain some notion of the *microcephalic* skulls and their prevalence among different races of the Collection, we may fix upon an internal capacity of 75 cubic inches, equal to 61 ounces av. of sand and 44·5 oz. av. of brain, or, deducting 10 *p. c.* for weight of membranes &c., to 40·1 oz. av., and see among which races this small dimension most prevails. Among the *European Races* there is an instance in an ancient Roman skull which has a capacity of 62 c. i., in the Spanish and Portuguese another of 71·7 e. i., in the English one of 72·9, and another among the Anglo-Saxon skulls of 74·1. These are all the European examples below 75 e. i. Among the *Asiatic Races* there are 5 families out of the 9 which contain skulls ranging below 75 (from 71·7–74·1) e. i. The former is a Hindoo Ryot. Among *African Races* a Guanehe woman's calvarium has an internal capacity as low as 66·8 c. i. (but this is No. 139, which is affected with atrophy and plastic deformation; it is the subject of Plate II. fig. 2), that of an Asango woman 69·9 e. i., a Negro skull 71·7, and a Bushman 72·9 e. i. Among *American Races* an Esquimaux woman's skull presents an internal capacity of 72·9 e. i. The two families of *Australian Races* both have skulls presenting internal capacities below the mean we have assumed. They are 66·8 and 72·9 e. i. But among the *Oceanic Races* there are only 5 families out of the 20 which fail in their smallest crania to reach our standard.

It is probable that enough has been said to show that the average development of the brain is less in some races than in others, and to afford a general indication of those races presenting the largest brains, as well as those which possess the smallest brains. In conclusion, it may be remarked, without intending to question that a voluminous brain is usually a good indication of mental capacity, that it seems likely that MORTON erred

¹ Dr. THURNAM, in an important memoir published in *The Journal of Mental Science*, 1866, vol. xii. p. 1, in which he has given the results of his extensive observations upon the weight of the brain in the insane, has introduced some remarks upon this subject, and formed a Table of the *Ratio of Cubical Capacity of Skulls of different Races*, which, however, in the main agrees with the order here pointed out (*On the Weight of the Brain and on the Circumstances affecting it*, p. 16). See also an elaborate memoir by Dr. A. WEISBACH, *Die Gewichtsverhältnisse der Gehirne österreichischer Völker, mit Rücksicht auf Körpergrösse, Alter, Geschlecht und Krankheiten*, Archiv für Anthropologie, 1867.

somewhat when he regarded the cubic capacity of the skull as the sure and simple index of mental power. Whilst the truth of the general law must be admitted, the observation of different human races shows that there must also be other essential elements which require to be taken into the estimate of the psychical measure of the different races of man. The difference in the volumes of their brains is too little to account for the immense diversities observed in the kinds and degrees of their mental powers; even whilst employing the term degrees, the impression prevails that they ought rather to be regarded, in some instances, as differences of a generic character. Anatomy affords the only rational basis for the study of man; craniology borders upon his great essential characters as an archencephalic animal; and it may safely be presumed that psychology will have to lend its aid before his classification shall be thoroughly understood¹.

¹ Dr. PRUNERBEY has recently given an extended series of measurements of 500 skulls contained in the Galerie Anthropologique of the Jardin des Plantes. His memoir is entitled *Résultats de Craniométrie* (Mém. de la Soc. d'Anthrop. de Paris, ii. 417). In speaking of his results, he says, "Il ressort de mes tableaux que généralement la femme est plus brachycéphale que l'homme" (p. 425). This is not in accordance with the data obtained from our Tables. In these the skulls of women are generally found to be more dolichocephalic than those of men. Yet the African races present a singular exception; for in many of them the crania of men are more dolichocephalic than those of women.

TABLES OF AVERAGES OF MEASUREMENTS.

TABLE I.—*European Races.*

Race.	Nr. of Skulls.	Sex.	A.	B.	C.	a.	b.	c.	D.	E.	F.	a.	b.	c.	G.	a.	b.	c.	H.	I.	J.	K.
1. Ancient Britons.....	13	♂	76.3	20.8	14.9	5	5.2	4.7	15	7.2	5.7	4.8	5.4	4.6	5.3	4.6	4.9	4.1	4.7	5.4	.79	.73
2. Ancient Britons.....	4	♀	..	20	14.2	4.9	5	4.2	13.6	7	5.5	4.6	5.3	4.4	5.2	4.6	4.7	3.9	4.6	4.9	.79	.70
3. Ancient Britons.....	17	♂ & ♀	76.3	20.4	14.5	4.9	5.1	4.5	14.3	7.1	5.6	4.7	5.3	4.5	5.2	4.6	4.8	4.4	4.6	5.1	.79	.71
4. Anc. Brits., engraved in 'Cr. Br.'	35	♂	80	21.2	15.2	5.2	5.1	4.8	15.4	7.2	5.8	4.8	5.5	4.6	5.5	4.8	4.9	4.1	4.7	5.2	.80	.75
5. Anc. Brit., engraved in 'Cr. Br.'	1	♀	66	20	14.2	4.8	5	4.3	14.6	7.1	5.6	4.5	5.5	4.2	5.5	4.6	4.6	4	4.3	5.1	.78	.77
6. Anc. Brits., not engrvd. in 'C. B.'	81	♂	79.3	21.1	15.2	5.1	5.2	4.8	15.2	7.3	5.8	4.9	5.3	4.6	5.5	4.8	4.9	4.2	4.7	5.4	.79	.75
7. Anc. Brits., not engrvd. in 'C. B.'	30	♀	69.6	20.2	14.6	5	4.9	4.6	14.5	7.1	5.5	4.6	5.2	4.3	5.3	4.6	4.7	3.9	4.3	5.1	.77	.74
8. Ancient Britons.....	146	♂ & ♀	76.6	20.8	15	5.1	5	4.7	15	7.2	5.6	4.7	5.3	4.5	5.4	4.7	4.8	4	4.6	5.2	.77	.75
9. Ancient Scottish	3	♂	71.3	20.9	14.7	4.5	5	4.8	15.1	7.1	5.9	4.8	5.5	4.5	5.4	4.6	4.8	4.4	4.6	5.2	.83	.75
10. Ancient Scottish	4	♀	70	20.5	14.5	4.9	4.7	4.8	14.1	7.2	5.4	4.7	5.1	4.1	5.1	4.4	4.6	..	..	..	.75	.70
11. Ancient Scottish	7	♂ & ♀	70.6	20.7	14.6	4.7	4.8	4.8	14.6	7.1	5.6	4.7	5.2	4.3	5.2	4.5	4.7	4.4	4.6	5.2	.79	.72
12. Ancient Romano-Britons.....	11	♂	72	21.1	14.9	5.1	5	4.9	14.7	7.4	5.7	4.8	5.3	4.4	5.2	4.6	4.7	4.2	4.7	5.2	.77	.70
13. Ancient Romano-Britons.....	3	♀	68.7	20.4	14.8	5.2	5	4.6	14.3	7.2	5.5	4.5	5.2	4.3	5.3	4.6	4.7	4.3	..	..	.76	.73
14. Ancient Romano-Britons.....	14	♂ & ♀	70.3	20.7	14.8	5.1	5	4.7	14.5	7.3	5.6	4.6	5.2	4.3	5.2	4.6	4.7	4.2	4.7	5.2	.76	.71
15. Anc. Romans and Rom.-Brits., engraved in 'Cran. Brit.'	7	♂	80.1	21.5	15.1	5.3	5.3	4.6	15.3	7.5	5.8	5.1	5.6	4.6	5.5	4.7	4.8	4.2	4.7	5.4	.76	.72
16. Ditto, ditto.....	1	♀	64	19.8	14.2	5	4.6	4.6	13.6	7.2	5.2	4.2	5.1	4.3	5	4.4	4.5	4.1	4.3	4.9	.72	.69
17. Ditto, ditto.....	8	♂ & ♀	78	20.6	14.6	5.1	4.9	4.6	14.4	7.3	5.7	4.6	5.3	4.4	5.3	4.5	4.6	4.1	4.5	5.1	.75	.70
18. Anc. Romans and Rom.-Brits., not engraved in 'Cran. Brit.'	31	♂	76.7	21.2	15.5	5.1	5	4.8	15	7.4	5.7	4.8	5.3	4.5	5.4	4.6	4.7	4.3	4.7	5.2	.78	.73
19. Ditto, ditto.....	12	♀	62.7	20.3	14.2	4.8	4.9	4.4	14.1	7	5.3	4.5	5	4.3	5.2	4.4	4.5	4.1	4.4	4.8	.75	.74
20. Ditto, ditto.....	43	♂ & ♀	69.7	20.7	14.8	4.9	4.9	4.6	14.5	7.2	5.5	4.6	5.1	4.4	5.3	4.5	4.6	4.2	4.5	5	.76	.73
21. Anglo-Saxon	16	♂	74.8	21	14.9	5.1	5.1	4.6	14.7	7.4	5.7	4.7	5.3	4.3	5.3	4.7	4.8	4.1	4.7	5.3	.77	.72
22. Anglo-Saxon	20	♀	67.2	20.1	14.4	4.9	4.9	4.6	14	7.1	5.3	4.6	5	4.2	5.2	4.5	4.6	4.2	4.3	4.9	.75	.73
23. Anglo-Saxon	36	♂ & ♀	71	20.5	14.6	5	5	4.6	14.3	7.2	5.5	4.6	5.1	4.2	5.2	4.6	4.7	4.1	4.5	5.1	.76	.72
24. Anglo-Saxon, engrvd. in 'C. B.'	10	♂	79	21.1	15.2	5	5.2	4.8	15	7.5	5.8	4.9	5.4	4.4	5.5	4.6	4.8	4.3	4.7	5.3	.77	.73
25. Anglo-Saxon, engrvd. in 'C. B.'	1	♂ & ♀	..	20	14.5	5	5	4.5	13.8	7.1	5.3	4.6	5	4.3	5.4	4.4	4.6	4.2	4.1	4.9	.74	.76

26. Anglo-Saxon, engrvd. in 'C. B.	11	♂	♂ & ♀	79	20·5	14·8	5	5·1	4·6	14·4	7·3	5·5	4·7	5·2	4·3	5·4	4·5	4·7	4·2	4·4	5·1	75	74
27. English	21	♂	♂	80·2	21·2	14·6	5·1	5·1	4·9	14·9	7·4	5·7	4·8	5	4·4	5·4	4·7	4·9	4·2	4·7	5·2	77	73
28. English	18	♀	♀	69	20·1	14·3	4·8	4·9	4·5	13·9	7	5·4	4·6	4·9	4·3	5·2	4·4	4·6	4	4·6	4·9	77	74
29. English	39	♂	♂ & ♀	74·8	20·6	14·4	5	5	4·5	14·4	7·2	5·5	4·7	5	4·3	5·3	4·5	4·7	4·1	4·7	5·2	77	73
30. Caithness men	6	♂	♂	77·6	21	15	5·1	4·9	4·8	15·1	7·2	5·8	5	5·2	4·5	5·3	4·8	4·9	4·2	4·9	5	80	73
31. Irish	16	♂	♂	77·8	21·2	15·1	5·1	5·2	4·8	14·8	7·5	5·6	4·7	5·1	4·4	5·2	4·6	4·8	4·2	5·1	5·4	75	70
32. Irish	15	♀	♀	71	20·1	14·5	5	4·9	4·5	14·2	7·1	5·4	4·6	4·6	4·8	4·2	4·5	4·6	4	..	4·9	76	73
33. Irish	31	♂	♂ & ♀	74	20·6	14·8	5	5	4·6	14·5	7·3	5·5	4·6	4·9	4·3	5·2	4·5	4·7	4·1	5·1	5·1	75	71
34. Merovingian Franks	5	♂	♂	81	21·2	15·3	5·2	5·1	4·7	15	7·4	5·5	4·8	4·9	4·3	5·4	5·6	4·7	4·8	4·2	4·8	74	75
35. French	22	♂	♂	75·4	20·7	14·7	5·1	4·9	4·6	14·9	7·1	5·6	4·8	5·2	4·3	5·3	4·6	4·7	4	4·7	5·2	78	73
36. French	4	♀	♀	67·8	19·6	13·9	4·8	4·7	4·3	13·8	6·8	5·3	4·5	4·9	4·2	4·9	4·3	4·4	3·9	4·5	4·7	77	72
37. French	26	♂	♂ & ♀	71·6	20·1	14·3	4·9	4·8	4·4	14·3	6·9	5·4	4·6	5	4·2	5·1	4·4	4·5	3·9	4·6	4·9	78	73
38. Spaniards	5	♂	♂	74·9	20·8	14·9	5	5·1	4·7	15·1	7·3	5·7	4·8	5·2	4·3	5·4	4·7	4·8	4·1	4·8	5·2	78	74
39. Ancient Romans of Italy	8	♂	♂	75·5	21	15·1	5·1	5·4	4·7	15·1	7·3	5·6	4·8	5·1	4·4	5·7	4·7	4·8	4·1	4·7	5·3	76	77
40. Ligurians	4	♂	♂	77·6	20·4	14·1	4·9	4·8	4·4	14·9	6·7	5·7	4·9	5·2	4·4	5·3	4·6	4·8	3·9	4·6	5·2	85	79
41. Italians	7	♂	♂	78·6	20·8	14·9	5·1	5	4·8	15	7·3	5·5	4·7	5	4·3	5·3	4·8	4·8	4·1	4·7	5·2	75	73
42. Italians, including Ligurians	12	♂	♂	77·8	20·6	14·6	5	4·9	4·7	14·9	7·1	5·5	4·7	5	4·3	5·3	4·7	4·8	4·1	4·6	5·2	78	75
43. Lapps	5	♂	♂	78·8	20·8	14·8	5·1	4·9	4·7	15	7·2	5·8	4·7	5·2	4·4	5·4	4·8	4·8	4	4·6	5·4	80	75
44. Lapps	4	♀	♀	66	21·1	14·2	4·8	4·6	4·7	14·2	7	5·7	4·7	5·2	4·2	5·1	4·5	4·8	4·2	4·6	4·9	81	72
45. Lapps	9	♂	♂ & ♀	72·4	20·1	14·5	4·9	4·7	4·7	14·6	7·1	5·7	4·7	5·2	4·3	5·2	4·6	4·8	4·1	4·6	5·1	80	73
46. Swedes	9	♂	♂	79·6	20·9	14·9	5	5	4·8	14·6	7·3	5·5	4·8	5	4·3	5·4	4·6	4·7	4·1	4·7	5·3	75	74
47. Swedes	3	♀	♀	71·3	20	14·3	5	4·7	4·6	13·8	7·1	5·4	4·6	4·9	4·2	5·1	4·3	4·5	4·1	4·6	4·9	76	71
48. Swedes	12	♂	♂	75·4	20·4	14·6	5	4·8	4·7	14·2	7·2	5·4	4·7	4·9	4·2	5·2	4·4	4·6	4·1	4·6	5·1	75	72
49. Frisians	5	♂	♂	80·7	20·8	15	5·1	5·1	4·7	15	7·3	5·7	4·9	5·3	4·5	5·4	4·6	4·8	4·1	4·8	5·2	78	73
50. Amsterdammers.	5	♂	♂	80·5	20·7	14·8	5·1	5	4·6	14·9	7·2	5·7	4·8	5·3	4·6	5·3	4·6	4·8	4·2	4·8	5·1	79	74
51. Netherlanders	17	♂	♂	79·9	20·7	14·7	5	5	4·6	14·9	7·1	5·7	4·8	5·2	4·5	5·3	4·6	4·7	4·1	4·6	5·3	80	74
52. Netherlanders	6	♀	♀	70·6	20·2	13·9	4·9	4·5	4·6	14·1	7	5·5	4·6	5·1	4·4	5·1	4·4	4·5	4·1	4·5	4·9	78	72
53. Netherlanders	23	♂	♂ & ♀	75·2	20·7	14·3	4·9	4·7	4·6	14·5	7·3	5·6	4·7	5·1	4·4	5·3	4·5	4·6	4·1	4·5	5·1	80	75
54. Prussians	8	♂	♂	83·5	21·2	15	5·1	5·1	4·7	15·2	7·8	5·4	4·9	5·2	4·5	5·4	4·7	4·8	4·2	4·8	5·3	80	74
55. Germans	2	♂	♂	66	19·7	13·9	4·7	5	4·2	14·2	6·8	5·8	5·4	4·9	4·2	4·8	4·3	4·4	3·8	4·3	4·7	79	71
56. Finns	8	♀	♀	79·2	20·7	14·8	5	5·2	4·5	15·2	7	5·7	4·8	5·3	4·5	5·5	4·7	4·8	4	4·8	5·4	82	78
57. Russians	10	♂	♂	80·1	21·2	15	5	5·2	4·7	14·8	7·3	5·7	4·8	5·2	4·5	5·4	4·6	4·7	4·2	4·9	5·5	78	73
58. Turks	3	♂	♂	76·6	20·4	14·3	4·6	4·8	4·4	15	6·9	5·8	4·8	5·1	4·4	5·4	4·6	4·8	3·8	4·1	5·2	84	78

	MORTON AND MEIGS.					THESAURUS CRANIORUM.				
	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.	Mean internal capacity.	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.	Mean internal capacity.
MODERN CAUCASIAN GROUP.										
<i>Teutonic Family.</i>										
Swedes	11	108.25	65	93	93.5	13	99.72	82.7	94.3	94
Germans ..	15	114	70	95		10	109.4	79	98.3	
Prussians ..	5	105	91	96		39	112	87.7	92	
English	7	97	82	90						
Anglo-Americans										
<i>Tschudic Family.</i>										
True Finns	9	112.5	81.5	94.3		7	99.72	91.2	96.3	
<i>Celtic Family.</i>										
Native Irish	6	97	78	87		27	108.2	77.8	91	

TABLE II.—*Asiatic Races.*

Race.	Nr. of Skulls.	Sex.	A.	B.	C.	a.	b.	c.	D.	E.	F.	a.	b.	c.	G.	a.	b.	c.	H.	I.	J.	K.
1. Hindoos of high caste	6	♂ & ♀	72	19.8	14.6	4.9	5.1	4.5	14.7	6.9	5.2	4.5	4.9	4	5.4	4.7	4.8	3.9	4.5	5	.75	.78
2. Hindoos of high caste	3	♂ & ♀	70.3	19.4	14	4.9	4.7	4.4	13.8	6.8	5.1	4.3	4.6	4.1	5.2	4.4	4.5	4	..	4.9	.75	.75
3. Hindoos of low caste	20	♂	71	19.6	14.4	5	5	4.3	14.6	6.9	5.3	4.5	4.9	3.8	5.4	4.6	4.7	3.9	4.6	5	.76	.78
4. Hindoos of low caste	27	♂ & ♀	67	19.3	14.2	4.9	5	4.3	13.6	6.9	5.2	4.1	4.6	3.9	5.1	4.4	4.5	3.8	4.3	4.7	.75	.74
5. Hindoos	54	♂ & ♀	70.1	19.5	14.3	4.9	4.9	4.3	14.2	6.9	5.2	4.3	4.7	3.9	5.2	4.5	4.6	3.9	4.4	4.9	.75	.76
6. Mussulmans	14	♂	72	19.8	14.6	5	5.1	4.4	14.4	7	5.2	4.4	4.9	4	5.3	4.6	4.7	3.9	4.4	4.9	.74	.75
7. Mussulmans	8	♂ & ♀	66	19.3	14.1	4.9	4.9	4.3	13.8	6.8	5.1	4.2	4.8	3.9	5.2	4.4	4.5	3.8	4.1	4.7	.75	.76
8. Mussulmans	22	♂	69	19.5	14.3	4.9	5	4.3	14.1	6.9	5.1	4.3	4.8	3.9	5.2	4.5	4.6	3.8	4.2	4.8	.74	.75
9. Khonds	2	♂	61	18.9	14.1	4.9	4.6	4.5	13.6	6.7	4.9	4.3	4.7	3.9	5	4.3	4.5	3.8	4.3	4.8	.73	.74
10. Nepalese. Khas	6	♂ & ♀	68.5	19.2	13.9	4.6	4.9	4.3	13.9	6.8	5.2	4.4	4.7	4.1	5.3	4.5	4.6	3.9	4.2	4.9	.76	.77
11. Lepchas	7	♂ & ♀	73.8	20	14.4	4.8	5.1	4.4	14.6	6.9	5.3	4.6	4.9	4.2	5.4	4.6	4.6	4	4.5	5.2	.77	.78
12. Lepchas	6	♂ & ♀	67.6	19.4	14.2	4.9	4.9	4.4	14	6.8	5.2	4.4	4.8	4	5.2	4.5	4.6	3.9	4.4	5	.76	.77
13. Lepchas	13	♂	70.6	19.7	14.3	4.8	5	4.4	14.3	6.8	5.2	4.5	4.8	4.1	5.3	4.5	4.6	3.9	4.4	5.1	.76	.77
14. Bodos	4	♂ & ♀	75.5	20.1	14.8	5	5.2	4.6	14.8	7	5.5	4.7	4.7	4.3	5.5	4.8	4.9	4	4.6	5.2	.78	.78
15. Bodos	7	♂ & ♀	75.5	19.6	14.3	4.9	4.5	4.4	14.2	6.9	5.2	4.4	4.8	4.2	5.4	4.6	4.7	3.9	4.4	5.2	.75	.78
16. Bodos	12	♂ & ♀	75.5	19.8	14.5	4.9	5.1	4.5	14.5	6.9	5.3	4.5	4.7	4.2	5.4	4.7	4.8	3.9	4.5	5.2	.76	.78
17. Bhotias	4	♂	76.5	20.2	14.5	4.9	5.1	4.4	14.5	6.9	5.5	4.6	4.8	4.4	5.3	4.7	4.8	3.9	4.5	5.3	.79	.77
18. Bhotias	10	♂ & ♀	70.6	19.6	14.3	4.9	5	4.3	14	7	5.2	4.4	4.8	4.1	5.2	4.6	4.6	4	4.2	4.9	.75	.74
19. Bhotias	14	♂ & ♀	73.5	19.9	14.4	4.9	5	4.3	14.2	6.9	5.3	4.5	4.8	4.2	5.2	4.6	4.7	3.9	4.3	5.1	.76	.75
20. Mishmees	3	♂	77	20.1	14.5	4.7	5.4	4.2	14.8	7	5.5	4.7	4.6	4.1	5.5	4.6	4.9	4.1	4.3	5.3	.78	.79
21. Thais	3	♂	77.6	19.9	14.6	5.1	5.1	4.4	15.5	6.6	5.6	4.7	5.2	4.3	5.8	4.8	5	4	4.9	5.2	.85	.87
22. Thais	3	♂ & ♀	70.5	19.2	14.1	4.9	4.6	4.6	14.8	6.4	5.5	4.4	5.1	4	5.6	4.6	4.8	4	4.3	5	.86	.87
23. Thais	6	♂ & ♀	74	19.5	14.3	5	4.8	4.5	15.1	6.5	5.5	4.5	5.1	4.1	5.7	4.7	4.9	4	4.6	5.1	.84	.87
24. Chinese	17	♂	78.1	20.2	14.9	4.9	5.1	4.8	14.7	7.1	5.5	4.5	5	4.3	5.6	4.6	4.9	4.2	4.7	5.2	.77	.78
25. Chinese	4	♂ & ♀	68	19.3	14.2	4.8	5	4.4	14.2	6.7	5.2	4.3	4.8	4	5.5	4.5	4.7	3.9	4.5	4.9	.77	.82
26. Chinese	21	♂	73	19.7	14.5	4.8	5	4.6	14.4	6.9	5.3	4.4	4.9	4.1	5.5	4.5	4.8	4.5	4.6	5	.76	.79

	MORTON AND MEIGS.					THESAURUS CRANIORUM.				
	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.	Mean internal capacity.	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.	Mean internal capacity.
<i>Indostanic Family.</i>	8	91	79	86	} 81.7	8	93.6	77.8	85.7	} 84.4
	25	90	67	78		54	100.9	65.6	83.2	
<i>MONGOLIAN GROUP.</i>	10	98	70	85		21	111.8	74.1	92.9	
<i>Chinese Family</i>										

TABLE III.—*African Races.*

Race.	Nr. of Skulls.	A.	B.	C.	a.	b.	c.	D.	E.	F.	a.	b.	c.	G.	a.	b.	c.	H.	I.	J.	K.
1. Berbers	4	70	20	14.6	5	4.9	4.7	13.9	7	5.1	4.4	4.8	4	5.2	4.5	4.6	4	..	4.8	73	74
2. Guanches	5	73	20.2	14.6	4.9	4.8	4.7	14.4	7.2	5.3	4.5	4.7	4.3	5.3	4.5	4.6	4.2	4.5	5.1	73	73
3. Guanches	17	69.9	19.7	14.1	4.8	4.8	4.4	13.9	6.9	5.3	4.5	4.9	4.1	5.1	4.3	4.5	4	4.4	4.8	77	73
4. Guanches	22	71.4	19.9	14.3	4.8	4.8	4.5	14.1	7	5.3	4.5	4.8	4.2	5.2	4.4	4.5	4.1	4.4	4.9	75	74
5. Negroes	12	72.4	20.2	14.6	5	5.2	4.4	14.5	7.2	5.3	4.5	4.6	4.2	5.4	4.5	4.7	4.1	4.7	5.2	73	75
6. Negroes	5	71.3	19.8	14.5	5	5.1	4.4	14.3	7	5.2	4.4	4.8	4.2	5.3	4.6	4.7	4.1	4.4	5	74	76
7. Negroes	17	71.3	20	14.5	5	5.1	4.4	14.4	7.1	5.2	4.4	4.7	4.2	5.3	4.5	4.7	4.1	4.5	5.1	73	74
8. Dahomans	9	75.1	20.6	14.9	5.1	5.2	4.5	14.9	7.4	5.3	4.5	4.9	4.5	5.5	4.7	4.9	4.2	..	5.3	71	74
9. Dahomans	3	71	19.8	14.3	5	4.9	4.3	14.2	7	5.2	4.6	4.7	4.1	5.2	4.6	4.7	4	..	5.2	74	74
10. Dahomans	12	73	20.2	14.6	5	5	4.4	14.5	7.2	5.2	4.5	4.8	4.3	5.3	4.6	4.8	4.1	..	5.2	72	73
11. Eboes	3	67	19.6	14.4	4.9	5	4.5	13.7	7	5.1	4.3	4.9	3.9	5.4	4.4	4.6	4.2	..	4.9	73	77
12. Yorubans	4	73.2	20	14.7	4.9	5.2	4.6	14.1	7.2	5	4.3	4.6	4	5.3	4.6	4.7	4.2	..	5	69	74
13. Equatorial Tribes	4	78.6	20.3	14.8	5.2	5	4.5	15.1	7.1	5.4	4.7	5	4.1	5.5	4.7	4.9	4.4	4.6	5.1	76	77
14. Equatorial Tribes	13	69.3	19.5	14.1	4.8	4.9	4.3	14.4	6.8	5.3	4.4	4.9	4	5.2	4.4	4.6	4.1	4.3	4.9	77	76
15. Equatorial Tribes	17	73.9	19.9	14.4	5	4.9	4.4	14.7	6.9	5.3	4.5	4.9	4	5.3	4.5	4.7	4.2	4.4	5	76	76
16. Hottentots	3	66.5	19.7	14.3	5	5	4.4	13.7	6.9	5.3	4.4	4.9	4.1	5.1	4.3	4.5	3.9	4.1	4.5	76	73
17. Zulus	4	75	20.2	14.6	5	5.3	4.5	14.5	7.2	5.2	4.6	4.6	4.3	5.5	4.6	4.8	4.1	..	5.2	72	76
18. Bushmans	4	63.5	19.2	14.3	5.2	4.5	4.5	12.9	6.8	5	4.2	4.8	4	4.9	4.2	4.3	4	3.9	4.5	73	72

	MORTON AND MEIGS.					THESAURUS CRANIORUM.		
	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.	Mean internal capacity.	Num- ber of Skulls.	Largest internal capacity.	Mean internal capacity.
NEGRO GROUP.								
American-born Negroes	12	86	73	80.8	} 82.25	53	105.8	86.3
Native Africans	64	99	65	83.7				

TABLE IV.—*American Races.*

Race.	Nr. of Skulls.	Sex.	A.	B.	C.	a.	b.	c.	D.	E.	F.	a.	b.	c.	G.	a.	b.	c.	H.	I.	J.	K.
1. Esquimaux, eastern	4	♂	75	20.2	14.8	4.9	4.9	5	14.2	7.2	5.3	4.4	4.9	4.3	5.6	4.7	4.8	4.1	..	5.4	73	.77
2. Esquimaux, eastern	2	♀	71	19.8	14.5	5	4.9	4.6	14.2	7.3	5.2	4.3	4.7	3.8	5.3	4.6	4.8	4	..	4.9	71	.72
3. Esquimaux, eastern	6	♂ & ♀	73	20	14.6	4.9	4.9	4.8	14.2	7.2	5.2	4.3	4.8	4.5	5.4	4.6	4.8	4.3	..	5.1	72	.75
4. Esquimaux, western	4	♂	73.2	20	14.3	4.8	4.8	4.6	14.2	7	5.3	4.5	4.6	4.2	5.4	4.7	4.9	4	4.8	5.5	75	.77
5. Esquimaux, Greenland	5	♂	82.7	21.1	15.4	5.5	5.3	4.8	14.6	7.6	5.5	4.7	4.9	4.5	5.8	5	5.1	4.2	4.8	5.8	72	.76
6. Esquimaux, Greenland	5	♀	70.8	20.1	15	5	5.1	4.7	14	7.3	5.1	4.3	4.8	4.2	5.5	4.5	4.8	4.1	..	5.1	69	.75
7. Esquimaux, Greenland	10	♂ & ♀	76.7	20.6	15.2	5.2	5.2	4.7	14.3	7.4	5.3	4.5	4.8	4.3	5.6	4.7	4.9	4.1	..	5.4	71	.75
8. Araucanians	7	♂	79.4	20.6	14.9	5	5.2	4.7	15.1	7	5.6	4.6	5.1	4.4	5.6	4.7	4.9	4	..	5.3	80	.80

	MORTON AND MEIGS.				THESAURUS CRANIORUM.			
	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.
	8	cub. in. 102	cub. in. 78.75	cub. in. 89	20	cub. in. 113	cub. in. 72.9	cub. in. 92.9
<i>Hyperborean Family</i>								

TABLE V.—*Australian Races.*

Race.	Nr. of Skulls.	Sex.	A.	B.	C.	a.	b.	c.	D.	E.	F.	a.	b.	c.	G.	a.	b.	c.	H.	I.	J.	K.
1. Australians.....	12	♂	63.2	20.1	14.7	5	5	4.5	14	7.2	5.2	4.3	5	4.2	5.3	4.5	4.5	3.9	4.5	5.2	.72	.73
2. Australians.....	3	♀	64	19.7	14.5	5	5	4.4	13.6	7.1	5.1	4.2	4.8	3.9	5.2	4.4	4.4	3.8	4	4.9	.71	.73
3. Australians.....	15	♂ & ♀	65.1	19.9	14.6	5	5	4.4	13.8	7.1	5.1	4.2	4.9	4	5.2	4.4	4.4	3.8	4.2	5	.71	.73
4. Tasmanians.....	6	♂	70	20.6	14.9	5.1	5.2	4.5	14.3	7.4	5.4	4.5	5.1	4.3	5.4	4.6	4.7	4	4.3	5.2	.73	.73
5. Tasmanians.....	4	♀	64	19.5	14	4.8	5.1	4.2	13.7	6.9	5.3	4.2	4.9	4.1	5.3	4.4	4.4	3.9	4	5.1	.76	.76
6. Tasmanians.....	10	♂ & ♀	67	20	14.4	4.9	5.1	4.3	14	7.1	5.3	4.3	5	4.2	5.3	4.5	4.6	3.9	4.1	5.1	.74	.74

	MORTON AND MEIGS.				THESAURUS CRANIORUM.			
	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.	Num- ber of Skulls.	Largest internal capacity.	Smallest internal capacity.	Mean internal capacity.
Australians	8	cub. in. 83	cub. in. 63	cub. in. 75	15	cub. in. 102	cub. in. 71.7	cub. in. 86.8

TABLE VI.—*Oceanic Races.*

Race.	Nr. of Skulls.	Sex.	A.	B.	C.	a.	b.	c.	D.	E.	F.	a.	b.	c.	G.	a.	b.	c.	H.	I.	J.	K.
1. Sumatrans	7	♂	74	19.9	14.2	4.8	4.8	4.5	14.4	6.9	5.3	4.4	4.8	4.1	5.4	4.6	4.7	3.9	4.6	5.1	76	78
2. Javans	22	♂	77.1	20.1	14.5	5	5	4.4	14.9	6.8	5.6	4.6	5.1	4.2	5.5	4.7	4.8	3.9	4.6	5.3	82	80
3. Javans	3	♀	70	19.2	14	4.9	4.9	4.1	14.3	6.6	5.3	4.5	4.7	4	5.4	4.6	4.7	3.9	4.2	5	80	81
4. Javans	25	♂ & ♀	73.5	19.6	14.2	4.9	4.9	4.2	14.6	6.7	5.4	4.5	4.9	4.1	5.4	4.6	4.7	3.9	4.2	5	81	80
5. Madurans	7	♂	80	20.1	14.7	5.1	5.1	4.4	15.3	6.9	5.6	4.7	5.3	4.2	5.6	4.8	5	3.9	4.6	5.4	81	81
6. Celebes, Natives of	6	♂	72.9	19.9	14.4	4.9	4.9	4.9	14.7	6.9	5.5	4.5	5.2	4.2	5.5	4.6	4.7	4.1	4.7	5.2	79	79
7. Dayaks	11	♂ & ♀	72	19.7	14.5	5	5.1	4.4	14.5	6.9	5.2	4.4	4.7	4.1	5.4	4.7	4.8	3.9	4.5	5.1	75	78
8. Dayaks	3	♀	67.8	19.5	14.2	4.8	5.1	4.3	14.2	6.7	5.3	4.3	4.8	4	5.5	4.5	4.7	3.7	4.3	5	79	82
9. Dayaks	14	♂	69.7	19.6	14.3	4.9	5.1	4.3	14.3	6.8	5.2	4.3	4.7	4	5.4	4.6	4.7	3.8	4.4	5	77	80
10. Bisayans	5	♂ & ♀	71.9	19.7	14.2	4.9	4.9	4.4	14.8	6.7	5.5	4.4	4.9	4.2	5.3	4.5	4.7	4	4.5	5.2	81	79
11. Bisayans	3	♀	69.5	19.5	14.2	5.1	4.9	4.2	14.3	6.8	5.4	4.4	5	4	5.3	4.5	4.7	3.9	4.1	4.8	79	78
12. Bisayans	8	♂ & ♀	70.7	19.6	14.2	5	4.9	4.3	14.5	6.7	5.4	4.4	4.9	4.1	5.3	4.5	4.7	3.9	4.3	5	80	79
13. Negritos	3	♂	65.2	19.4	13.9	4.8	4.8	4.4	13.8	6.7	5.2	4.3	4.4	4	5.2	4.5	4.6	3.9	4.3	5	77	77
14. Papuans	3	♂ & ♀	75	20.1	14.2	4.8	4.9	4.3	14.6	7	5.4	4.5	5	4	5.4	4.6	4.7	4	4.4	5.2	77	77
15. Salomon Islanders.	3	♂	71.1	19	14.3	4.7	5.1	4.6	14.7	7.1	5.1	4.3	4.6	4.3	5.4	4.5	4.6	3.9	..	5.3	72	76
16. New Caledonians	4	♂	75	20	15	4.9	5.3	4.7	14.5	7.2	5.1	4.3	4.6	4.2	5.7	4.7	4.8	3.9	4.5	5.4	70	79
17. New Hebrideans	9	♂	72	20	14.7	4.9	5.2	4.7	14.3	7	5.1	4.2	4.7	4	5.4	4.6	4.7	4.1	4.5	5.2	72	77
18. Maoris	7	♂	72.7	20.1	14.5	5	4.9	4.6	14.5	7	5.3	4.3	4.9	4.1	5.6	4.6	4.8	4	4.5	5.4	75	80
19. Marquesan Islanders.	16	♂	77	20.5	14.8	5	5	4.6	15	7.1	5.5	4.5	5.1	4.3	5.5	4.7	4.9	4.4	4.8	5.3	77	77
20. Marquesan Islanders.	11	♀	69.5	19.6	14.2	4.9	4.7	4.6	14.3	6.8	5.4	4.3	5	4	5.3	4.5	4.6	4	4.7	4.8	79	77
21. Marquesan Islanders.	27	♂ & ♀	73	20	14.5	4.9	4.8	4.6	14.6	6.9	5.4	4.3	5	4.1	5.3	4.5	4.6	4.2	4.7	5	78	77
22. Kanakas	64	♂	77.5	20.4	14.9	5.2	5	4.6	15.3	7	5.6	4.5	5.2	4.2	5.7	4.9	5	4.1	4	5.3	79	81
23. Kanakas	52	♀	70.3	19.6	14.2	4.9	4.8	4.4	14.4	6.7	5.4	4.4	5.1	4	5.5	4.6	4.8	3.9	4.3	5	80	81
24. Kanakas	116	♂ & ♀	73.9	20	14.5	5	4.9	4.5	14.8	6.8	5.5	4.4	5.1	4.1	5.6	4.7	4.9	4	4.1	5.1	80	81

Tables of the Internal Capacities of the Series of Skulls of this Collection, embracing those of Men and of Women, without distinction, 854 in all, expressed in Cubic Inches, on the plan of MORTON'S great Table, increased by Dr. Aitken MEIGS to 663 crania.

I. *European Races.*

Race.	N ^r . of Skulls.	Largest internal capacity.		Smallest internal capacity.		Mean internal capacity.		Mean internal capacity.	
		oz. av.	cub. in.	oz. av.	cub. in.	oz. av.	cub. in.	oz. av.	cub. in.
1. Ancient Britons	7	90	109.4	66	80.2	80.2	97.5	75.7	92.1
2. Ancient Scottish	4	77.5	94.2	62.5	75.6	71.5	86.9		
3. Ancient Roman	9	82	99.7	64	77.8	71.3	86.8		
4. Romano-British	4	85	103.3	65	79	73.1	88.8		
5. Anglo-Saxon	9	83	100.9	61	74.1	72	87.6		
6. English	32	92.5	112.4	60	72.9	74.8	90.9		
7. Welsh	2	83	100.9	73	88.7	78	94.8		
8. Scottish	9	78.5	95.4	66	80.2	75	91.2		
9. Irish	26	100	121.6*	62	75.4	75	91.2		
10. Ancient Gauls	4	85.3	103.7	63.5	77.2	74.3	90.3		
11. Merovingian Franks	6	83.5	101.5	65	79	76.5	93		
12. French	16	84	102.1	63	76.6	72.7	88.4		
13. Spanish and Portuguese	12	81.1	98.6	59	71.7	72.7	88.4		
14. Ancient Romans	10	87.5	106.4	51	62	72.3	87.9		
15. Italians	14	94	114.3	68	82.7	76.5	93		
16. Lapps	6	87	105.8	66	80.2	74.5	90.6		
17. Swedes	13	82	99.7	68	82.7	75.7	92		
18. Dutch	27	88	107	64	77.8	76.2	92.5		
19. Germans	16	90	109.4	65	79	81	98.5		
20. Finns	8	91	110.6	75	91.2	80.6	98		
21. Russians	14	92	111.8	72	87.6	81	98.5		
22. Cossacks	7	86.5	105.2	76	92.4	81	98.5		
23. Turks	3	81	98.5	74	89.9	76.7	93.3		

* This megaloecephalic endocranium of an Irishman, and, especially, that in the Bateman Museum, mentioned at p. 65, exceed in magnitude the skull of the Dutchman referred to by MORTON. The internal capacities of the three are, in cubic inches, respectively, 121.6, 124.2, and 114.

1. Hindoos	61	83	100.9	59	71.7	66.7	81.1	72.4	88.7
2. Indian Mussulmans	21	85	103.3	61	74.1	70.2	85.4		
3. Khas	7	78	94.8	60	72.9	69.7	84.7		
4. Lepchas	12	80	97.2	61	74.1	71.2	86.5		
5. Bodos	11	87	105.8	66	80.2	74.5	90.6		
6. Bhotias	13	84.5	102.7	60	72.9	71.6	87		
7. Mishmees	3	81	98.5	71	86.3	76.3	92.7		
8. Thais	7	81	98.5	63	76.6	75.8	92.1		
9. Chinese	19	92	111.8	65	79	76.2	92.6		

III. *African Races.*

1. Arabs	4	76	92.4	69	83.9	71.2	86.5	70.9	86.2
2. Berbers	4	78	94.8	65	79	70	85.1		
3. Guanches	20	82	99.7	55	66.8	70	85.1		
4. Negroes	15	87	105.8	59.5	71.7	71.8	87.3		
5. Ashantees	4	76	92.4	64	77.8	70.8	86.1		
6. Dahomans	12	81	98.5	66	80.2	74.6	90.7		
7. Yorubans	5	79	96	65	79	73.2	89		
8. Eboes	4	70	85.1	65	79	67.5	82		
9. Gaboon Tribes	17	85	103.3	57.5	69.9	71.5	86.9		
10. Hottentots	2	69	83.9	64	77.8	66.5	80.9		
11. Kafirs	7	86	104.5	64	77.8	76.2	92.6		
12. Zulus	4	81	98.5	72	87.6	75	91.2		
13. Bushmans	4	70.5	85.7	60	72.9	63.6	77.3		

IV. *American Races.*

1. Esquimaux	22	93	113.1	60	72.9	74.5	90.6	73.1	89
2. Chenesyans	3	82	99.7	67	81.4	72.5	88.1		
3. Caribs	4	71	86.3	66	80.2	68.2	83.3		
4. Araucanians	6	95	115.5	67	81.4	77.3	94.1		

V. *Australian Races.*

Racc.	Nr. of Skulls.	Largest internal capacity.		Smallest internal capacity.		Mean internal capacity.	
		oz. av.	cub. in.	oz. av.	cub. in.	oz. av.	cub. in.
1. Australians	22	86	104.5	55	66.8	66.6	80.9
2. Tasmanians	11	78	94.8	60	72.9	67.9	82.5

VI. *Oceanic Races.*

1. Nians	3	72	83.5	61.5	74.7	68.3	83.6
2. Sumatrans	7	83	100.9	67	81.4	74.7	90.8
3. Javans	24	88	107	67.5	82	76.7	93.3
4. Madurans	6	91	110.6	75	91.2	81.1	98.6
5. Balinese	3	82	99.7	66	80.2	71.5	86.9
6. Amboynese	5	86	104.5	60.5	73.5	74.4	90.5
7. Tidorese	2	85	103.3	77	93.6	81	98.4
8. Alfourous	3	76	92.4	71	86.3	73.1	88.8
9. Celebeans	10	83	100.9	67	81.4	74.2	90.2
10. Dayaks	17	81	98.5	60	72.9	70.7	85.9
11. Bisayans	9	79.5	96.6	61	74.1	69.8	84.8
12. Negritos	2	69.5	84.5	61	74.1	65.2	79.2
13. Papuans	3	80	97.2	73	88.7	75.3	91.6
14. Salomon Islanders	4	74	89.9	66.5	80.9	71.1	86.5
15. New Caledonians	6	80	97.2	65	79	73.8	89.7
16. Loyalty Islanders	3	82	99.7	70	85.1	75.1	91.3
17. New Hebrideans	10	79	96	66	80.2	72	83.5
18. Maoris	5	78	94.8	62	75.4	69.9	84.9
19. Marquesan Islanders	29	91	110.6	64	77.8	74.9	91.0
20. Kanakas	121	89.5	108.8	61.5	74.7	73.7	89.6

B. Remarks upon the Skeletons, Measurements, &c.

Upon the exotic skeletons in this Collection, it has been thought advisable to make some observations, and, at the same time, a few comparisons of them with each other and with others, of which descriptions have been given by different authors. Difficulties and disadvantages have often been felt in the preparation of this 'Catalogue,' which would not have been experienced by Professors of Anatomy and others, whose education and whose pursuits render them familiar with the subjects embraced in the work, and who spend their days in anatomical museums. The access to such museums, containing European and other skeletons, is a want especially experienced in this portion of the labour; it can only be partially counterbalanced by the printed descriptions accessible to me. The museum richest in exotic skeletons, that of the *Galerie Anthropologique*, has no Catalogue that I am aware of; and no effort has been made to render them and the other portions of the Collection available for the purposes of science.

The skeletons in this Collection are these:—

I. AMERICAN.—1. The **Illinois** Indian (No. 1416†), which is that of a man of about 55 years of age. The skull, of which the measurements are given at p. 233, is large, and the bones of the entire skeleton robust, with all their ridges and rough surfaces well-marked.

II. AUSTRALIAN.—2. The **Australian** woman (No. 1261†), aged about 35 years, and hence fully matured.

3. The **Australian** man (No. 1262†), aged about 20 years. The epiphyses of the long bones have not yet been attached by ossific union. The bodies of the vertebræ are porous, and, like those in the Australian skeleton described by Prof. ECKER, have been bored and mined, in places, by the larvæ of an insect.

III. OCEANIAN.—4. The **Javan** man (No. 1370†), aged about 40.

5. The **Javan** man (No. 1371†), aged about 35.

6. The **Lifuan** man, "Awita" (No. 810†), aged about 24. The epiphyses of the long bones are still unattached by ossific union. The dentition is nevertheless quite complete, the teeth in the prognathous jaws being large.

7. The **Tannese** man (No. 685†), aged about 30 years.

References.—R. OWEN, 5184, "An artificially articulated skeleton, with the mature dentition complete, of a female Australian," *Descr. Cat. of Osteol. Series, Mus. R. Coll. Surg.*

Engl. ii. 805. G. WILLIAMSON, *Obs. on Hum. Crania*, p. 85. A. ECKER, *Zur Kenntniss der Eingebornen Süd-Australiens*. W. KEFERSTEIN, *Bemerkungen über das Skelett eines Australiers vom Stamme Warrnambool*. J. WYMAN, *Observations on the Skeleton of a Hottentot*.

I will give the principal measurements of the Skeletons of the Collection in a tabular form, and endeavour to render it more complete by the addition of other measures. The skeleton of the ILLINOIS Indian greatly resembles that of a PUELCHÉ (a man of about 40 years of age), which is in the Collection of the Anthropological Society. In stature and in general robustness of the bones, and also in the form of the skull, there is much resemblance.

The average stature of eleven Australian men was found to be 5 feet 6 inches, that of a woman 4 feet 10·5 inches¹. The measurements of Australian skeletons, arranged according to stature, in feet and inches, are:—

	Sta- ture.	Femur.	Tibia.	Hume- rus.	Ulna.
1. ♂, Port Essington (No. 5284, Mus. R. Coll. Surg. Engl.)	ft. in. 5 8·7 ²	ft. in. 1 6·9	ft. in. 1 3·8	ft. in. 1 1·5	in. 11
2. ♀, æt. c. 30 (No. 5184, Mus. R. Coll. Surg. Engl.)	5 2·5	1 5·5	1 2·2	1 0·2	10
3. ♂, æt. c. 35 (Mus. Middlesex Hosp.)	5 1·5	1 5·5	1 2·2	1 0·5	10·2
4. ♂, æt. c. 20, No. 1262†, S. Australia	5 0·4	1 5·5	1 2·7	1 0·2	10·1
5. ♂, æt. c. 25, S. Australia (Freiburg Anat. Mus.)	4 11·7	1 4·6	1 2·2	1 0	9·5
6. ♀, æt. c. 40, S. Australia (Freiburg Anat. Mus.)	4 11·4	1 4·3	1 1·6	1 1·4	10
7. ♀, æt. c. 35, S. Australia, No. 1261†	4 11	1 4·8	1 1·8	1 0·3	9·7
Averages	5 1·7	1 5·3	1 2·6	1 0·3	10

From these measurements it appears that Prof. OWEN's male skeleton is much the tallest of the series, and my female (No. 1261†) the shortest. I have long had the impression that the natives of different parts of Australia differed a good deal in stature. "The narrowness of the cranium, the prominence of the alveolar parts of the jaws, the flatness of the nose-bones, and the recession of the chin," asserted by Prof. OWEN to be *inferior characters*, as compared with other races of mankind, are all markedly present in the woman's skull of No. 1261†, as well as some other peculiarities, having the same bearing, already alluded to, particularly the narrowness and lowness of the frontal, which is depressed at the sides by a want of extension of the alisphenoid, occasioning an almost entire absence of spleno-parietal

¹ *Report on Aborigines, Victoria, 1859*, p. 45.

² Calculated by the rule of Dr. HUMPHRY.

sutures, the result of the specific defect of development of the anterior lobes of the brain. In the man's skull (No. 1262†) these peculiarities are not quite so strongly marked, and there are short speno-parietal sutures. This perhaps shows that there is a greater tendency to lower forms (those of the anthropomorphous apes) in the female than in the male. There is a great resemblance in the form of the two skulls, the supra-occipital region being equally full and prominent in both. The nasals, which are short and flat in the woman, are longer and higher in the man. The nasal orifice is narrower in the man than in the woman. There is a great width of the arch of the bony palate in both; and the alveolar arches of both jaws are longer, flatter, and more semicircular than in Europeans. The decided prognathousness of both skulls is very apparent. In a profile view (when the cranium is held in its natural position), it is seen that the suture between the maxillary and jugal bones is in a perpendicular line with the glabella, and from this line to the tips of the upper incisors is very nearly 2 inches. The teeth are large, yet not larger than in some Europeans, although those of the woman are somewhat larger than those of European women. In the woman they are worn down, but not very deeply, to a level surface in both jaws; in the much younger man, the crowns are quite fresh and perfect. Prof. OWEN has often pointed out the great development of the teeth in Australians: the alveolar arches are larger than in Europeans, and he mentions it as a well-marked characteristic in his clear exposition of the peculiarities of the Australian cranium (*Catalogue*, p. 829). Whether it deserves to be indicated as so peculiarly a proper attribute of Australians is perhaps somewhat doubtful. The teeth of some of the Oceanic peoples are very large, and those of the New Hebrideans and the surrounding islands, the hypsi-stenocephalic races, are quite as remarkable for magnitude as those of Australians. I have not had the opportunity to observe whether the two outer fangs of the molars are distinct in both jaws in this latter people. The Museum of the Royal College of Surgeons of England is rich in the skulls of Australians. In describing that of a male of the Western Port Tribe (No. 5304), Prof. OWEN remarks, "In the narrow form of the cranium, the low receding forehead, the prominent obtuse borders of the orbits, the prominence of the jaws, and advanced position of the canines of the lower jaw, this skull presents, irrespective of any artificial distortion" [no tribe of Australians distorts the skull], "the lowest character of any Human Skull in the Museum." Such preeminence, derived from the characters Prof. OWEN has enumerated, may be disputed in the present Collection by two fine crania of New Hebrideans, from Fate or Sandwich Island (Nos. 818 and 819). In the former, the prognathousness is such that when the skull is placed in its natural

position and regarded in profile, a line falling down perpendicularly from the glabella, passes decidedly behind the maxillo-jugal suture, and between the second and third molars of both jaws, so that it measures from this line 2·3 inches to the tips of the upper incisor teeth. In the lowness of forehead also it appears to exceed the Australians', in the magnitude and preponderance of its masticatory apparatus decidedly so¹. There can be no hesitation in saying that it would be quite as hopeful a search to look for the philosopher's stone as to look for an Australian skull, or a skull closely resembling that of an Australian, among European races.

The unusual slenderness of the bones is the most remarkable feature in the skeletons of Australians; it is very striking in the woman's skeleton (No. 1261†). Prof. ECKER has made the same remark, "Am ganzen Skelett, besonders den Extremitäten, ist die Gracilität der Knochen auffallend." It is difficult to make this singular slenderness apparent, except to the eye. A few measurements of the circumference of the principal long bones may, however, be given:—

	Length of Femur.	Circum- ference at smallest part.	Circ. 3 in. above knee.	Circ. of Humerus at small- est part.
	inches.	inches.	inches.	inches.
♂ Anglo-Saxon, very robust	19	3·9	5·1	—
♂ Old English	19	3·5	4·7	—
♂ Carib, San Domingo	17·1	3·5	4·5	—
♀ Carib, San Domingo	15·6	3·1	3·9	—
1 ♂ Australian, Port Essington	18·9	3·4	4·5	—
2 ♀ Australian, No. 5184	17·5	2·8	—	1·9
3 ♂ Australian, Middlesex Hospital.	17·5	3·4	3·5	2·5
4 ♂ Australian, No. 1262†	17·7	3	4·5	2·2
7 ♀ Australian, No. 1261†	16·8	2·7	3·8	2·2

These measurements will be sufficient to show that the peculiar meagreness of Australians (which has been attributed by superficial observers to a scarcity of nutritious food) is not the mere consequence of defective nutrition of the soft parts. The gracile bones of the skeleton prove that it is an essential and inherent race-character. In conformity with the rest of the skeleton, the pelvis of the woman is remarkable for the thinness, slenderness, and the delicacy and lightness of its bones. The central part of the iliac fossa is diaphanous, the pubes thin, the ascending ramus of the ischium slender, and the obturator foramen large and of a triangular form. The spinous processes of the *ossa pubes* are strongly developed. In singular contrast with

¹ See a memoir *On the peculiar Crania of the Inhabitants of certain Groups of Islands in the Western Pacific*, by J. Barnard DAVIS, M.D., 1866: pl. ii. figs. 1 & 2 give a profile and face view of this skull.

	No. 1456†. Aino ♀, æt. c. 25.	No. 1416†. Illinois ♂, æt. c. 55.	Anthrop. Society's Puelche ♂, æt. c. 40.	No. 1495†. Anc. Peruv. ♂, æt. c. 70.	No. 1261†. Australian ♀, æt. c. 35.	No. 1262†. Australian ♂, æt. c. 20.	Ecker's Australian ♂, young.	Keferstein's Australian ♂, old.	No. 1370†. Javan ♂, æt. c. 40.	No. 1371†. Javan ♂, æt. c. 35.	No. 810†. "Awita," Loyalty Isl. ♂, æt. c. 24.	No. 685†. Tannese ♂, æt. c. 30.
1. Height of the Skeleton. From the Vertex to the prominence at the base of the Os Calcis	{ 60 in. 1522 mm.	{ 66.6 in. 1690 mm.	{ 36 in. .675 mm.	..... .....	{ 58.7 in. 1491 mm.	{ 60.6 in. 1540 mm.	{ 59.7 in. 1514 mm.	{ 63.1 in. 1600 mm.	{ 65 in. 1649 mm.	{ 59.5 in. 1510 mm.	{ 60.9 in. 1547 mm.	{ 66 in. 1675 mm.
2. Length of the Vertebral Column. From the upper surface of the Atlas to the lower surface of the last lumbar vertebra	{ 21.5 546	{ 22.8 578	{ 20.3 515	Diseased	{ 22.6 575	{ 19.5 496	{ 19.7 500	{ 21.7 550	{ 20.8 527	{ 20 507	{ 19 484	{ 22.3 567
3. Length of the Os Sacrum, in a right line	{ 3.7 95	{ 3.7 95	{ 4.8 121	{ 4.1 in. 105 mm.	{ 3.9 99	{ 3.6 91	..... .....	{ 4.3 110	{ 4.3 110	{ 4.4 112	{ 3.9 99	{ 4 102
4. Breadth of the Os Sacrum	{ 4 102	{ 4.3 110	{ 4.6 116	{ 3.8 97	{ 3.5 88	{ 3.2 82	{ 3.7 95	{ 3.8 97	{ 4.2 106	{ 3.9 99	{ 4 102	{ 4 102
5. Height of the entire Pelvis. From a line on the level of the top of the Cristæ Iliorum to another on a level with the lower surface of the tuberosities of the Ischia	{ 6.9 175	{ 7.4 188	{ 8.7 220	{ 6.1 153	{ 6.5 163	{ 6.8 170	..... .....	{ 7.9 200	{ 6 151	{ 7.5 190	{ 7.1 179	{ 7.4 188
6. Distance between the Cristæ Iliorum, inside	{ 8.8 223	{ 9.5 240	{ 9.4 237	{ 9 227	{ 8 203	{ 7 178	..... .....	{ 9.5 240	{ 9.8 248	{ 8.8 223	{ 9 227	{ 9.9 251
7. Distance between the Anterior Superior Spines of the Iliæ, inside	{ 7.2 182	{ 8.4 214	{ 9.1 230	{ 8.4 214	{ 6.2 156	{ 5.3 134	{ 7.7 195	{ 8.1 205	{ 9.3 235	{ 8.2 208	{ 8.3 210	{ 9 227
8. Transverse diameter of the superior opening of the Pelvis	{ 4.7 120	{ 5 127	{ 4.6 116	{ 4.4 112	{ 4.6 116	{ 3.8 97	{ 4.3 110	{ 4.3 110	{ 4.8 121	{ 4.3 110	{ 4.5 114	{ 4.8 121
9. Conjugate diameter of the superior opening of the Pelvis	{ 4.6 117	{ 4.3 110	{ 4.6 116	{ 3.6 91	{ 4 102	{ 3.6 91	{ 4.3 110	{ 4.2 106	{ 3.8 97	{ 3.6 91	{ 4.2 106	{ 4.3 110
10. Pelvic Index, or ratio of conjugate to transverse diameter, taken as unity .....	.97	.86	1.08	.81	.87	.93	1.00	.95	.81	.83	.92	.81
11. Transverse diameter of the outlet of the Pelvis. Inside the tuberosities of the Ischia	{ 4.3 110	{ 3.1 78	{ 4.7 120	{ 3.4 86	{ 4.3 110	{ 3.3 83	{ 3.8 97	..... .....	{ 4.2 106	{ 4.1 105	{ 3.9 99	{ 3.5 88
12. Conjugate diameter of the outlet. From the lower edge of the Symphysis Pubis to the tip of the Sacrum	{ 4.9 124	{ 4.8 121	{ 4.1 105	{ 4.1 105	{ 4.3 110	{ 4.2 106	..... .....	..... .....	{ 4.5 114	{ 4.1 105	{ 3.7 95	{ 4.3 110
13. Breadth of the shoulders. From the outside of one Acromion to that of the other ..	{ 13.1 332	{ 14 355	{ 15 380	{ 13.5 344	{ 12.1 306	{ 12 304	{ 11.3 286	..... .....	{ 12 304	{ 12 304	{ 12.2 310	{ 12.5 317
14. Length of the Humerus, extreme length	{ 11.3 286	{ 12.8 325	{ 12.7 321	{ 11.2 284	{ 12.3 312	{ 12.5 317	{ 12.1 306	{ 12.4 315	{ 11.9 302	{ 11.4 289	{ 12.4 315	{ 12.5 317
15. Length of the Ulna, extreme length	{ 9.4 237	{ 11.1 281	{ 10.5 265	{ 9.3 235	{ 9.6 242	{ 10 253	{ 9.7 245	..... .....	{ 10.2 258	{ 10 253	{ 10.3 261	{ 11 277
16. Length of the Radius, extreme length	{ 8.5 215	{ 10.3 261	{ 9.6 242	{ 8.5 215	{ 8.9 225	{ 9.2 233	{ 8.9 225	{ 9.9 251	{ 10 253	{ 9.2 233	{ 9.7 245	{ 10.5 266
17. Length of the Hand. From the upper arch of the Os Lunare to the point of the middle finger	{ 6.9 175	{ 7.8 198	{ 7.1 179	{ 6.6 167	{ 6 152	{ 6.6 167	{ 6.3 159	{ 6.9 175	{ 7.8 198	{ 6.5 163	{ 7 178	{ 8.2 208
18. Length of the whole upper Extremity	{ 26.5 673	{ 29.7 754	{ 29.2 740	{ 26 659	{ 26.7 681	{ 28.9 736	{ 27.2 688	{ 29.6 751	{ 27.1 690	{ 26.9 687	{ 28.5 726	{ 30.8 784
19. Length of the Femur, extreme length	{ 16.3 414	{ 18.3 467	{ 17.3 440	{ 14.9 378	{ 16.3 414	{ 17.7 450	{ 16.6 420	{ 17.6 447	{ 17 432	{ 16.2 413	{ 17.3 440	{ 18 458
20. Length of the Tibia, extreme length	{ 12.7 318	{ 15.3 389	{ 14.2 360	{ 12.6 319	{ 13.9 353	{ 14.8 378	{ 14.2 360	{ 14.4 366	{ 14 356	{ 14.2 360	{ 14.6 370	{ 14.6 370
21. Length of the Fibula, extreme length	{ 12.7 318	{ 15 382	{ 14 356	{ 12.1 306	{ 13.1 331	{ 14.6 370	{ 13.5 344	..... .....	{ 13.9 353	{ 13.5 344	{ 14.1 357	{ 14.5 368
22. Length of the Foot, extreme length	{ 8.5 215	{ 9.8 248	{ 9.3 235	{ 8.3 210	{ 7.7 195	{ 8.2 208	{ 7.9 201	{ 8.7 220	{ 9.5 241	{ 9.1 231	{ 8.5 215	{ 9.7 245
23. Length of the whole lower Extremity	{ 31.2 792	{ 35.7 912	{ 32.6 825	{ 29.3 743	{ 31.8 814	{ 34.1 870	{ 32.5 823	{ 34.7 880	{ 32 816	{ 32.3 821	{ 34.3 874	{ 35 890
24. Proportion of the length of the Arm to that of the Leg = 1.00, of No. 18 to No. 23 ..	.84	.83	.89	.88	.83	.82	.83	.829	.84	.82	.83	.88
25. Proportion of the length of the Radius to that of the Humerus = 1.00 .....	.75	.80	.75	.75	.70	.73	.73	.79	.84	.80	.77	.83
26. Proportion of the length of the Tibia to that of the Femur = 1.00 .....	.76	.83	.81	.84	.85	.84	.85	.82	.80	.87	.82	.80
27. Proportion of the length of the Femur to the Stature .....	.272	.276	.262	.....	.284	.292	.277	.268	.261	.273	.29	.273
28. Angle formed by the arch of the Pubes, approximately	90°	60°	81°	64°	90°	68°	.....	.....	64°	84°	62°	56°

the rest of this delicate skeleton is the thick, heavy skull, very prognathous face, with wide nostrils and prominent dental apparatus of great magnitude.

Regarding the stature of ♂ No. 1262† as 100, the femur has the proportion of 29·2, and the humerus of 20·5. These proportions in ♀ No. 1261† are, femur 28·3 and humerus 20·8. I have not the means of a satisfactory comparison with other skeletons; but Dr. PRUNERBEY, in a Table, has stated the averages of these proportions in the skeletons of Europeans and of Negroes¹. These are:—in European men, the femur 27·28, the humerus 19·5; in European women, the femur 26·76, the humerus 21; in Negroes, the femur 27·94, the humerus 19·5; in Negresses, the femur 28·59, the humerus 19·8. Assuming that our calculations derived from these two Australian skeletons are correct, it would appear that their femora and humeri are decidedly long, longer in proportion than in European and Negro skeletons. By extending the calculation to all the seven skeletons of Australians, the results are not much dissimilar. They afford, in the male skeletons, the proportions of 28·1 for the femur, and of 20·6 for the humerus; and in the female skeletons, of 28·1 for the femur, and 20·7 for the humerus. Hence it is highly probable that Australians are distinguished for long as well as slender femora and humeri. Whether the same peculiarity extends to the bones of the leg and of the forearm, I have not even an equal amount of evidence to show. In the two skeletons here described, the tibia of the man bears the proportion of 20·4 to the stature regarded as 100, and that of the woman 23·3. In Dr. PRUNERBEY's Table the numbers are, for European men 22·54, and for Negroes 23·80.

With the view of rendering the proportions of the different parts of the skeletons of the Collection as conspicuous as I am able, I have constructed the Table opposite, which extends to 28 items, and, I believe, embraces every measurement of importance.

¹ See his valuable *Mémoire sur les Nègres*, Tabl. iii., Mém. de la Soc. d'Anthrop. i. 336.



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CRANIA BRITANNICA.

DELINEATIONS AND DESCRIPTIONS

OF

THE SKULLS

OF THE

ABORIGINAL AND EARLY INHABITANTS

OF THE

BRITISH ISLANDS;

WITH

NOTICES OF THEIR OTHER REMAINS.

BY

JOSEPH BARNARD DAVIS, M.D., F.S.A.,

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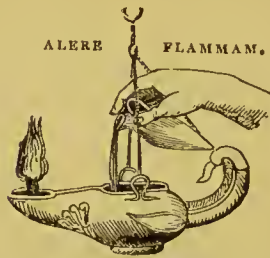
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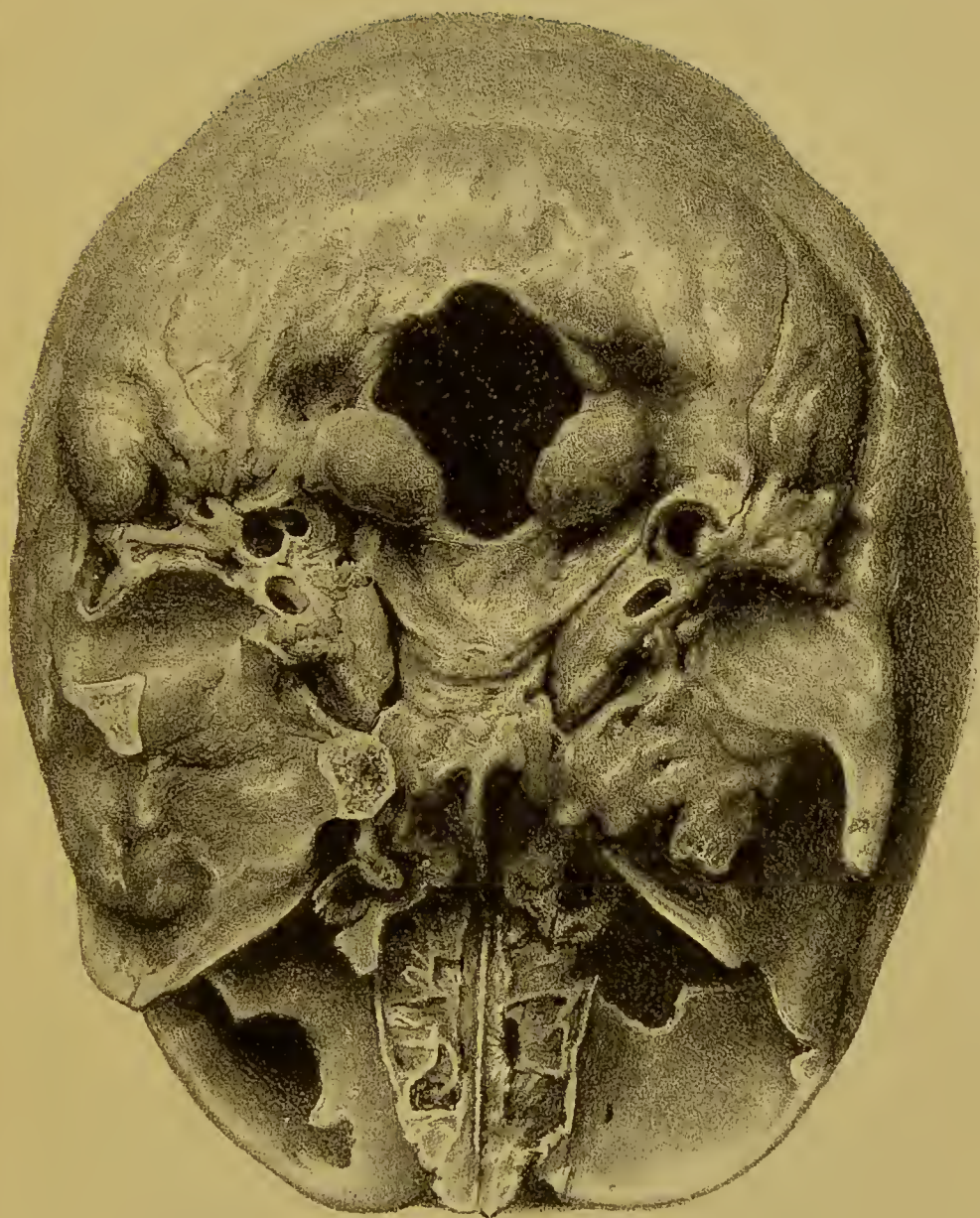
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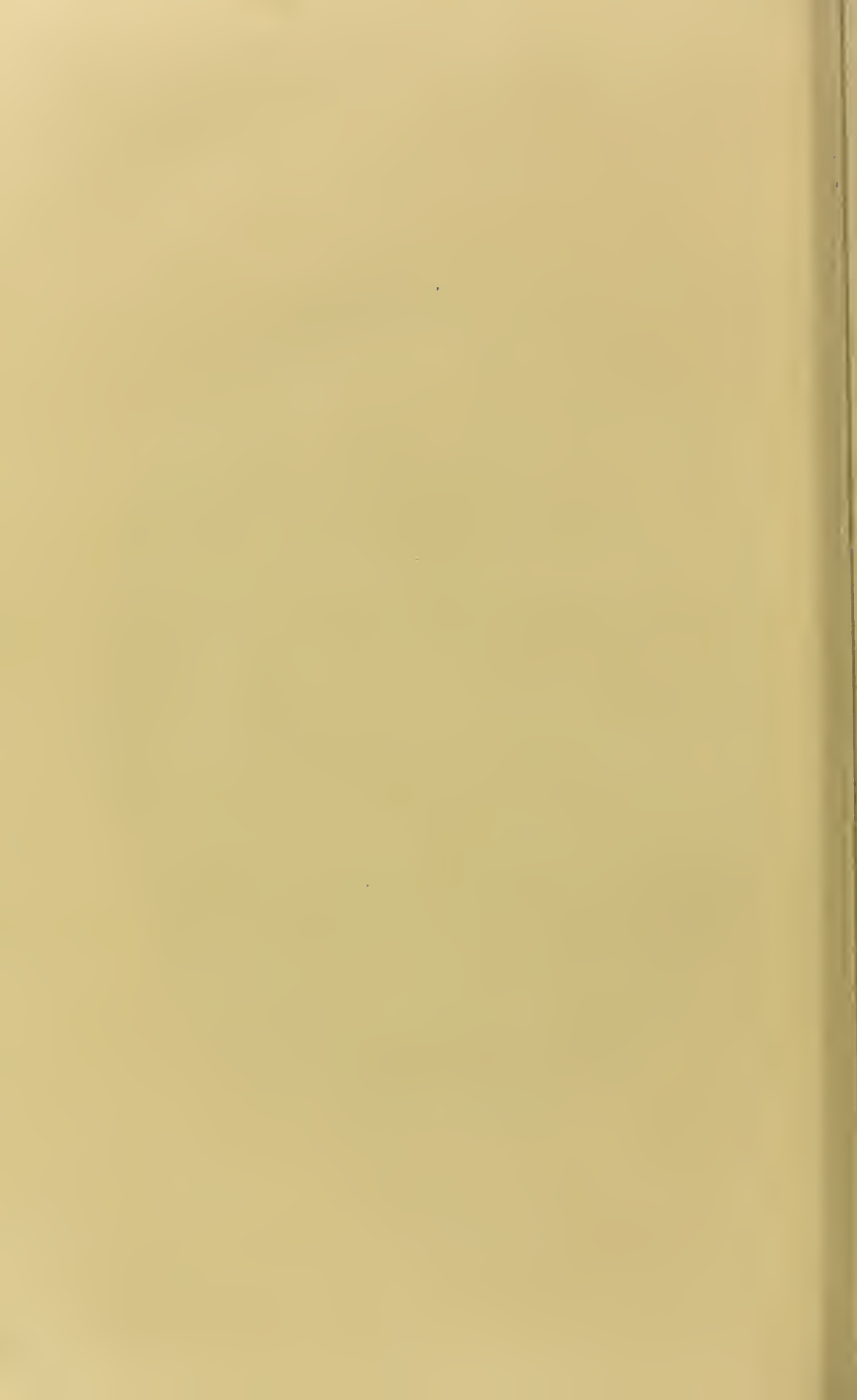




Fig 1.

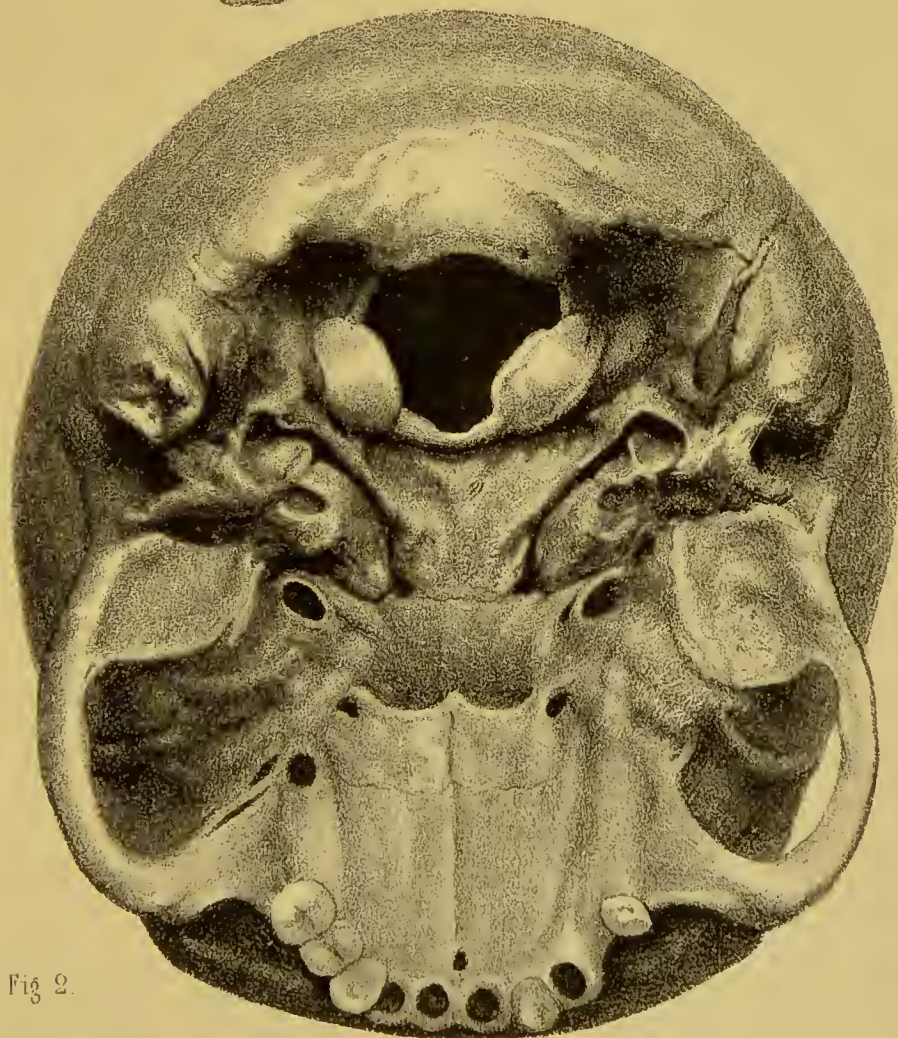


Fig 2.

